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Member Associated Business Papers, Inc.

The Newspaper of the Industry

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AIR CONDITIONING AND REFRIGERATION News

Issued Every Monday at 450 W. Fort St., Detroit 26, Mich.

March 21, 1949

Vol. 56, No. 12, Serial No. 1044
Established 1926.

Reentered as second-class matter October 3, 1938 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1949, by Business News Publishing Co.

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INSIDE DOPE

by GEORGE F. TAUBENECK

Whoa, Brother!
They Never Learn
It's a Bad Deal
Tough to Buck
Life Without Hope
These Questions Are Urgent

(Concluded from March 14 Issue)

Whoa, Brother!

Were bureaucratic administrators so smart as they claim to be, they'd petition Congress to revamp or clarify a law which a tremendous number of citizens can't live with and don't like. But that isn't their practice.

Bureaucrats tried to enforce the unpopular Eighteenth Amendment, for example. In so doing, they established thousands of expensive, extraneous, snooping, tax-consuming bureaus in the hinterlands of our nation. But could they enforce Prohibition? No! All they succeeded in doing was to multiply juvenile delinquency, establish racketeering as a lucrative national industry, and to egg on "average" citizens in the abandoned flouting of all the laws on the statute-books.

The long-term effects of superimposed, ultra-bureaucratic, thought-censoring, tax-consuming administrative laws upon a nation's solvency and *morale* is never considered by the demagogues who frame these laws—and then hire the multitudinous bureaucrats who are supposed to enforce unenforceable legislation.

Prohibition didn't work in the United States, and was erased from our law-books, because it was contrary to human nature and to human preferences.

Shouldn't that classical bureaucratic farce—the short-lived, unloved Prohibition Era—be a lesson to the government-worshipping screwballs of our modern world?

They Never Learn

It should, but we all doubt that would-be bureaucratic Overlords will learn anything from this bust, or anything from history. Incipient Overlords are insulated from the cauterizing prophylaxis of Public Opinion by the comforting phalanxes of their sycophants.

Blinded by the bifocalism of their anastigmatic theories, they confuse everybody.

They do far more harm than good, because they never bother to learn the Who-What-Where-When-Why of any practical situation.

It's a Bad Deal

Even though beguiling substitutes for the free market and free-wheeling personal preferences may be proffered by the "long-hairs" who would impose a foreign way of life upon us, it's entirely likely that their correctives and reforms will turn out to be much worse for John Doe than the faults and injustices which these hot-shot reformers attempt to ameliorate or revolutionize.

Theories are one thing; reforms *in practice* another.

Theories and reforms are promulgated by political appointees who are prone to laugh at the thought of saving taxpayer's money, to scorn the notion that the shortest distance between two points is a straight line, and to cherish the delusion that proficiency in delaying tactics is a passport to a lifetime "cushy" job.

Sic semper reformosis.

The delusion that "organization" (a government bureau or a union) promotes efficiency and the general welfare is a sad one. In proof: take

(Concluded on Page 24, Column 2)

NLRB Election for Coast Unions May Be Postponed

LOS ANGELES — The election ordered by the National Labor Relations Board to determine what union, if any, will represent employes of refrigeration contractors in this area marks a definite step, at least, in the long struggle to determine what course employe representation would take in refrigeration contracting circles here.

But there are some members of the industry here who doubt that the election—if and when it is held—will bring anything like a final solution to the matter.

The election is supposed to take

(Concluded on Back Page, Column 2)

January Household Sales Increase 15%

NEW YORK CITY—Reports to the National Electrical Manufacturers Association from 13 producers of electric household refrigerators showed that January sales rose 15% above those for December.

World sales by the companies in January totaled 396,329, compared to 344,438 for the preceding month (based on reports from 14 companies).

The month was marked by substantial increases in sales of 8 to 12-cu. ft. refrigerators. Sales of 8-

(Concluded on Page 25, Column 2)

REMA Meeting To Hear Rep. Crawford

WASHINGTON, D. C. — Fred L. Crawford, member of the U. S. House of Representatives from Michigan, and James L. Allen, senior partner in the firm of Booz, Allen & Hamilton, will be the principal speakers at the membership meeting of Refrigeration Equipment Manufacturers Association, March 31-April 2 at Edgewater Beach hotel in Chicago.

Both men will speak at the afternoon session of the general membership meeting, Friday, April 1. Crawford will discuss general business conditions and government relations, and Allen will speak on "Is Your Company Prepared for Rough

(Concluded on Back Page, Column 5)

Dealer Says 'Price-Fixing' Group Is Forcing Him Out

SALT LAKE CITY — Columnist Drew Pearson has reported in his daily newspaper column that the FBI is investigating, and will report to the Anti-Trust Division of the U. S. Department of Justice, charges by Briant Badger, president of Uptown Appliance & Radio Co., that he is being forced out of business by a "conspiracy in restraint of trade" that involves price-fixing.

Badger and other principals in the Uptown Appliance & Radio Co. have filed a $500,000 suit in district court here, alleging that the firm's source of supply of refrigerators, radios, and other merchandise was cut off when the officials of the store refused to enter into an understanding to charge a uniform price on the merchandise they took.

To dramatize its position, Uptown removed all merchandise from its Main St. showroom window, and replaced it with a coffin in funeral surroundings. The coffin contained pictures of the three principals in the firm and a black-backgrounded card stated:

(Concluded on Page 4, Column 3)

6 Major Appliance Firms Make 'Selective' Price Cuts

• • •

G-E Household Line Pared 4-10%

NEW YORK CITY—General Electric has reduced prices, effective March 14, on two refrigerator models, two home freezers, and five electric range models.

The price changes were in the range of 4 to 10%.

Charles E. Wilson, president of G-E, said the new price reductions "are in keeping with the company's policy of passing on to the consumer the cost economies made possible by expanded production.

"In addition, we are giving recognition to the fact that a special effort will be required to maintain present production and employment. General Electric's refrigerator and range production is presently at an all-time high level, and we want to continue the current wide public acceptance of the lines on which the price reductions are being announced."

REFRIGERATORS

Model	Old Price	New Price
NB 4	$232.00	Same
NC 6	216.00	Same
NF 6	224.00	Same
NB 8	259.00	$245.00
NC 8	279.00	264.00
	(on '48 models only)	
NF 8	329.00	Same
NH 8	410.00	Same
NC 10	329.00	Same
NF 10	364.00	Same
NH 10	460.00	Same

HOME FREEZERS

NA 4	239.75	219.00
NA 8	330.00	319.00

RANGES

AP1F1	169.95	Same
CP1F1	199.95	179.95
CD1F1	239.95	229.95
CD3F1	249.95	239.95
DD1F1	289.95	274.95
DD1F3	299.95	284.95
DD2F1	369.95	Same
ED1F1	399.95	Same

New G-E Commercial, Air Cooling Prices Bow

BLOOMFIELD, N. J.—Price reduction has been made on General Electric commercial refrigeration units, store-type air conditioners, and water coolers.

While one report stated that the reductions averaged about 8%, officials of the G-E Air Conditioning Department said that reductions varied from model to model in all catagories of equipment, and thus it would be impossible to specify any "average" reduction.

Hotpoint Models Come Down $10-25

CHICAGO—Price reductions on one 1949 model refrigerator, two freezer models, and five range models were announced by Hotpoint, Inc. last week.

The reductions, ranging from $10 to $25, are as follows:

REFRIGERATOR

Model	Old Price	New Price
EA 8	$259.00	$245.00

HOME FREEZERS

EK 4	239.75	219.00
EK 8	330.00	319.00

RANGES

RB 31	199.95	179.95
RB 32	239.95	229.95
RC 9	294.95	269.95
RC 12	294.95	279.95

Here's What Other Companies Say

DETROIT—Here are the comments and viewpoints of some of the refrigerator manufacturers who (up to press time) had not announced price reductions:

A Westinghouse company spokesman was quoted as saying "Westinghouse has no comment to make on these price changes until we have had an opportunity to analyze them. Our prices have always been comparatively low."

Admiral Corp. will not cut list prices of either refrigerators or ranges at the present time, a company official stated. It was pointed out that the company had reduced refrigerator prices 15% compared with 1948 and range prices 20 to 25%.

Crosley distributors were said to have received information indicating that no price changes were likely at this time as Crosley has just begun producing its 1949 refrigerator line.

Kelvinator Prices Average 5% Lower

DETROIT—Price adjustments on several 1949 Kelvinator refrigerator and range models were announced recently by the Kelvinator Div., Nash-Kelvinator Corp.

On models affected, the new suggested retail prices are an average of 5% or $10 to $20 lower.

Following are the new prices.

REFRIGERATORS

	New	Old
CR	$209.95	$219.95
RS	239.95	249.95
RD	269.95	279.95
CM	299.95	319.95

RANGES

	New	Old
ER481	$154.95	$169.95
ER483	199.95	209.95
ER483-C	229.95	239.95
ER487	279.95	289.95
ER489	309.95	329.95

Refrigerator prices include warranty.

Price of Coldspot Models Reduced

CHICAGO—A price reduction averaging 8% on Coldspot refrigerators and corresponding cuts on Coldspot home freezer and Kenmore range prices were announced by Sears, Roebuck & Co. last week.

Sears retail stores in Detroit advertised the refrigerator price cuts as a straight $20 per model. The home freezer reductions ranged from $15 to $35 on four models. Three electric range models were slashed by $20 while a fourth dropped $15.

Chicago officials said the price of a 9-cu. ft. refrigerator was reduced from $274.95 to $254.95.

The price reductions, as advertised in Detroit, were as follows:

COLDSPOT REFRIGERATORS

Size of Unit	New Price	Old Price
7.3 cu. ft.	$179.95	$199.95
7.0 cu. ft.	204.95	224.95
7.0 cu. ft.	224.95	244.95

COLDSPOT HOME FREEZERS

6 cu. ft.	214.95	229.95
9 cu. ft.	269.95	289.95
12 cu. ft.	324.95	359.95
18 cu. ft.	409.95	444.95

KENMORE ELECTRIC RANGES

	159.95	179.95
	179.95	199.95
	219.95	234.95
	224.95	244.95

Frigidaire Drop Affects '48 Models

DAYTON—Price reductions were made on 1948 Frigidaire models which remain in dealer stocks, it was announced last week when Frigidaire introduced its 1949 line of refrigerators (reported in the March 14 issue of the NEWS).

Suggested retail prices of 1948 refrigerators were reduced $8 to $25 or approximately 5%, and 1948 ranges $15 to $20, or approximately 7%. The Frigidaire 1948 automatic washer model was reduced $15.

Dealers will be rebated on any products in inventory, the announcement stated.

To clarify the Frigidaire price reductions, the following schedule of prices on 1948 models, is repeated:

REFRIGERATORS

Model	Old Price	New Price
MJ6	$217.75	$209.75
MJ7	239.75	224.75
MJ9	289.75	274.75
MJ11	314.75	299.75
DJ7	299.75	279.75
DJ9	339.75	319.75
DJ11	359.75	339.75
CIJ10	449.75	424.75

RANGES

RK3	169.75	154.75
RK4	179.75	164.75
RK10	199.75	184.75
RK20	239.75	219.75
RK40	279.75	259.75
RK60	309.75	289.75
RK70	349.75	329.75

AUTOMATIC WASHER

WK60	314.75	299.75

Norge 'Suggests' New '48 Model Listings

DETROIT—Norge Div. of Borg-Warner Corp. has reduced "suggested" retail prices on two 1948 models in its refrigerator line, but no price reductions on its 1949 models are contemplated at the present time, Norge officials have stated

Model M-8-48 now carries a suggested price of $249.95, a $20 reduction, and model ND 8-48 now is priced at $299.95, a $30 price cut.

IN THIS ISSUE

Such desperation measures of failing stores as drastically cutting prices may be minimized in the Inland Empire area of Washington and Idaho if the efforts of local "distress boards" prove successful. Read about this new idea on **page 2.**

• • •

Experiments are afoot in Indiana and Michigan that may have far reaching effects on the milk cooler business. One Indiana dairyman claims he can can fresh milk and keep it indefinitely without refrigeration. Details are on **page 8.**

• • •

Want some ideas on how to move $1,500,000 worth of appliances a year? The head of a three-year-old Texas dealership tells how he did it last year on **page 12.**

• • •

Sensational improvements in frozen orange juice production have been made by a method of heat pump evaporation or distillation, described in detail on **page 18.**

• • •

When should prime surface coils or fin and tube coils be used? Answers to this and other fundamental questions about choosing proper coils are answered by Albert Hanson of Drayer-Hanson on **page 16.**

Hoosier State RSES Meets with Firemen

Pictured at a special meeting of the Hoosier State Association of RSES are: (Front row) Floyd Duvall, state safety director; Chester Thomas, James Gorman, Joseph Hamill, John Sehr, all Indianapolis firemen; and Dwight Bilbee, state board director. (Second row) Noah Mohr, state board director; Paul Reed, international educational chairman; Elwood Wulf, state president; George Schuld, Sr., international safety director; Louis Townsend, safety director; and Thomas Driskell, state chairman of board of directors.

* * *

Indianapolis Servicemen To Be on Emergency Call

INDIANAPOLIS — The Hoosier State Association of the Refrigeration Service Engineers Society, at a special meeting in the Antlers hotel here, voted to furnish the Indianapolis Fire Department with the names and telephone numbers of all its members in this city.

With such information, it was explained, the fire department can secure the assistance of a refrigeration expert when needed to help close down a refrigeration system in a building on fire.

The day's program included a talk on seals by Paul Reed, international educational chairman; a talk on safety by George Schuld, Sr., international safety director; and a luncheon.

Dealers with Inventory Trouble May Get Aid Of 'Distress Boards'

SPOKANE, Wash. — To prevent industry damaging merchandising methods resulting from the financial distress of over-stocked dealers, the board of governors of the Inland Empire Electrical Dealers Association has adopted a plan calling for the appointment of distress boards in the association's chapters.

The bulletin explained as follows:

"The distress board will be composed of experienced, financially-stable dealers. Any dealer who finds himself in a difficult position will be invited to meet with a distress board and, in complete confidence, present his problem and receive suggestions as to means of solving his difficulty from those who have survived similar difficult times in the past.

"Distress boards will work with the wholesalers who are principally involved in each case to make all practical arrangements to relieve the distressed dealer of sufficient amounts of his excess inventory to put him again in a tenable position.

"In the event the wholesalers are unable to assist the distressed dealer sufficiently, the association distress board will work with other dealers of the same franchised lines to accomplish the same purpose."

The association commented: "This constructive, unselfish plan can save some businesses from failure. In doing so it will save the industry from the damage that can result from the desperation measures of failing stores."

January Sales of Appliance Wholesalers, Refrigeration Parts Experience 2% Dip

Report Shows Most Inventories Rising Above December

WASHINGTON, D. C. — January sales of refrigeration parts and appliance and specialties wholesalers reporting to the Bureau of the Census declined from the levels of both December, 1948, and January a year ago, the bureau announced.

Sales in January by 25 refrigeration parts wholesalers were 13% below those in January, 1948, and 2% under those in December. Dollar sales reported by the wholesalers for January, 1949, totaled $762,000.

Reports from 86 appliance and specialties wholesalers showed January sales were off 7% from January a year ago and 33% from December. These firms' dollar sales during the month amounted to $9,061,000.

End-of-January inventories (valued at cost) of 20 refrigeration parts wholesalers dropped 1% from those of the same 1948 month but rose 6% above the December level. Dollar value of the January, 1949, inventories totaled $2,428,000.

Increases of 37% over January a year ago and 8% over December were registered by the January inventories of 65 appliance and specialties wholesalers. January inventory value of these concerns amounted to $14,485,000.

Reports to the bureau by 2,947 wholesale houses in various lines of trade showed January sales dropped 14% below those recorded in December, 1948.

"While this decrease follows the usual seasonal trend, it is somewhat greater than would normally be expected," the bureau said. "Compared with January, 1948, a drop in sales level of 8% is noted—the first January to January-a-year-ago decrease recorded since 1943. . . .

"January inventories, valued at cost, continue to increase somewhat, gaining 16% over the corresponding period a year ago and 5% over December, 1948, according to reports submitted by 1,885 firms."

* * *

SALES

Kind of Business and Geographic Division	Per Cent Change Jan. 1949 From Jan. 1948	Per Cent Change Jan. 1949 From Dec. 1948	Jan., 1949 No. of Firms Reporting	Jan., 1949 Sample Reported Dollar Sales (add 000)
Appliances and specialties wholesalers.	— 7	—33	86	9,061
New England	0	—40	6	452
Middle Atlantic	+11	—45	18	1,637
East North Central	— 3	—31	13	1,337
West North Central	— 7	—16	11	1,170
South Atlantic	—10	—29	17	1,744
Mountain	—18	—40	8	715
Pacific	—26	—33	7	1,033
Refrigeration equipment, parts (com'l)	—13	— 2	25	762
Middle Atlantic	—13	+10	4	107
East North Central	—10	— 8	5	158
Pacific	—28	—10	6	158

INVENTORY, END-OF-MONTH (at cost)

Kind of Business and Geographic Division	Per Cent Change Jan. 1949 From Jan. 1948	Per Cent Change Jan. 1949 From Dec. 1948	Jan., 1949 No. of Firms Reporting	Jan., 1949 Sample Reported Dollar Sales (add 000)
Appliances and specialties wholesalers.	+37	+ 8	65	14,485
New England	+57	— 9	4	575
Middle Atlantic	+11	+ 2	10	2,156
East North Central	+22	+ 3	9	1,238
West North Central	+56	+31	9	1,738
South Atlantic	+66	+20	16	3,543
Mountain	+45	+ 2	7	1,563
Pacific	+33	— 9	6	1,361
Refrigeration equipment, parts (com'l)	— 1	+ 6	20	2,428
Middle Atlantic	*	*	*	*
East North Central	— 4	+ 3	44	488
Pacific	— 5	+ 2	5	588

*Insufficient data to show separately.

TRY THIS

"RATTLE-RATTLE" TEST

BEFORE YOU BUY A DRIER

Shake the Unit Back and Forth—If the Dehydrant is Loosely Packed and Rattles, Powdering May Have Taken Place.

A HENRY Abso-Dry* DRIER WILL NOT RATTLE

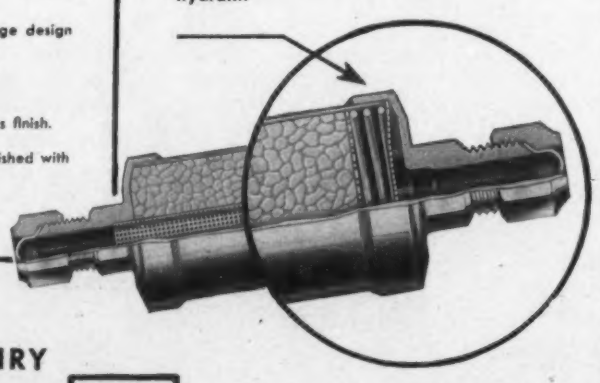
THE DEHYDRANT IS UNDER SPRING PRESSURE

The dehydrant is tightly packed in all Henry Driers and the compression spring is used in non-refillable types having a shell diameter of 2". There is no "rattle rattle" because of an exclusive patented compression spring design which holds dehydrant particles under pressure, minimizing "powdering", due to abrasive action with resultant clogging of screen. Installed in a refrigerant system, the spring also compensates for volume changes in the dehydrant and prevents refrigerant by-passing.

OTHER FEATURES OF HENRY ABSO-DRY DRIERS:

1. After all traces of free moisture are removed, a Henry Drier with flare connections is pressure sealed with dehydrated air. Loosening of a flare nut produces a hiss, proving that there are no leaks and that the drier is in factory-fresh condition.
2. Patented dispersion tube minimizes pressure drop and exposes entire volume of silica-gel to refrigerant. Suitable for suction line applications.
3. 30 x 250 mesh monel outlet filter will not collapse under any ordinary system pressure.
4. Forged brass end cap construction with integral connections. Wide wrench flats.
5. Patented 8-Bolt distortion-proof flange design in cartridge type driers.
6. Silver brazed construction.
7. Polished and lacquered natural brass finish.
8. Driers with flare end connections furnished with flare nuts and seal bonnets.

LARGE VIEW shows patented compression spring which maintains constant pressure on the entire volume of dehydrant.



MAKE THE "RATTLE-RATTLE" TEST AND YOU, TOO, WILL STANDARDIZE ON HENRY

SOLD BY LEADING WHOLESALERS

HENRY VALVE CO.

Melrose Park, Ill. (Chicago Suburb) • Cable: HEVALCO Chicago.

* Registered U. S. Pat. Off.

Valves, Driers, Strainers, Control Devices and Accessories for Refrigeration and Air Conditioning and Industrial Applications.

Dessent, Chicago Contractor, Dies

CHICAGO—E. I. Dessent, veteran Chicago refrigeration contractor, died last week in a hospital here where he had been undergoing treatment for a heart condition.

One of the real "old timers" in the commercial refrigeration field in the Chicago area, he organized the Dessent Engineering Co. which pioneered the meter payment plan of merchandising beverage coolers.

Coolerator Moves Service Department

DULUTH, Minn.—The Coolerator Co. has transferred its service departments from the factory to new quarters at 526 S. Lake Ave. in Duluth, John Unger, Coolerator national service manager has announced.

Coolerator national service department general offices as well as parts and repair divisions were moved to the new location, which occupies more than 7,000-sq. ft. of floor space. Space vacated at the factory is being utilized by production facilities.

Fedders-Quigan Corp. Net Profit Increases Slightly for 1948

BUFFALO — A net profit of $1,729,542, or $1.44 per common share, on net sales of $21,593,475 for the year of 1948 has been announced by Fedders-Quigan Corp. here.

These figures compare with a net profit of $1,717,667 on net sales of $20,121,814 for 1947, the company said.

Re-Appointment of Halberg Announced by McQuay

MINNEAPOLIS — H. Blake Thomas, general sales manager, McQuay, Inc., has announced the re-appointment of the Halberg Co., 3423 Farragut Rd., Brooklyn, N. Y., as the heating and air conditioning representative in Brooklyn, Long Island, and Staten Island.

Dick Halberg was sales engineer with the Trane Co. in the New York area for over 10 years. From 1941 through 1945 he represented McQuay, also in the New York area.

From 1945 through 1948, Halberg was a manufacturer's sales representative for Sampsel Time Control, Skidmore Corp., Rittling, Inc., and New Yorker Steel Boiler Co.

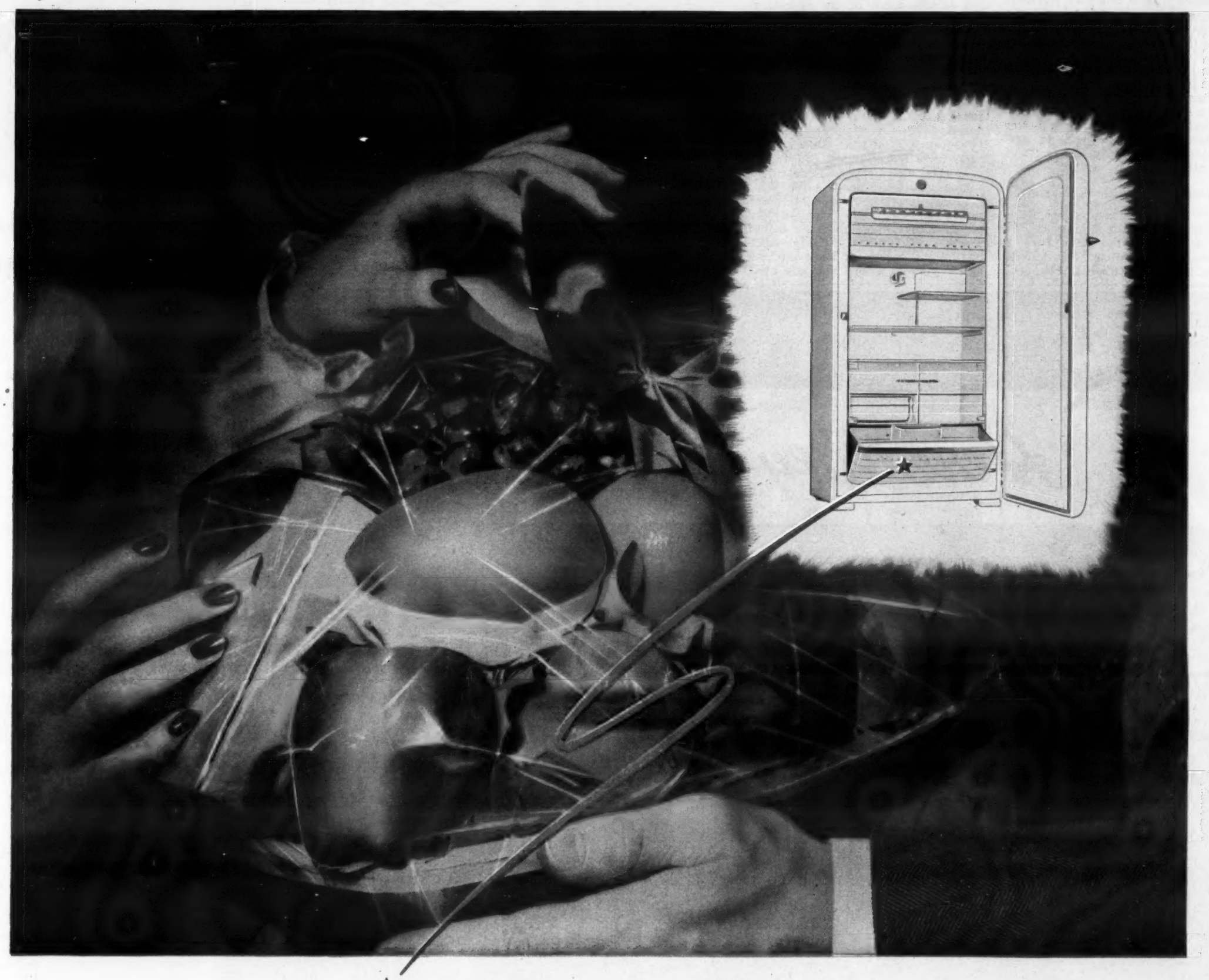
Halberg will operate through the McQuay office at 122 E. 42nd St., New York City as well as his Brooklyn address.

for draft and bottle beverage coolers...

IDEAL Speed-Freeze PRODUCTS

IDEAL COOLER CORPORATION

2953 EASTON AVE., ST. LOUIS 6, MO.



★ "IT'S A GIFT!"

When Kelvinator introduced a new concept in home refrigeration . . . *cold clear to the floor* . . . it was apparent—to retailer and buyer alike—that here was a major advancement in refrigerator design.

For here, like a gift, was the *extra* refrigerated space . . . in no bigger a cabinet . . . that American women long had wanted. Yes, up to two cubic feet of *additional* cold space . . . with a Fruit Freshener that easily holds a whole basket of fresh fruits and vegetables.

Here was an improvement so plain and clearly visible that even a child could understand it. Here were advantages instantly apparent to women seeking greater food-keeping utility . . . greater food-handling convenience . . . in their refrigerators.

It's no wonder retailers report unprecedented acceptance for Kelvinator.

But this "gift" does not stem from luck. It stems from Kelvinator's definite, retail-minded policies . . . and such pledges as: *Kelvinator will engineer ever-new, brilliant features that have strong consumer appeal and practical usefulness in the home.*

That's one reason why there's extra value in Kelvinator products . . . *and* extra values for retailers in the Kelvinator Dealer Franchise.

TUNE YOUR RADIO TO EDWIN C. HILL and "THE HUMAN SIDE OF THE NEWS," Monday through Friday . . . another retail-minded contribution to the progress of Kelvinator Dealers.

GET MORE . . . Get Kelvinator

. . . THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY

KELVINATOR, DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT, MICHIGAN

NRFA Says Revised Reg. W Is 'Political Straddle'

BALTIMORE—The recent relaxation of consumer credit controls was termed a "political straddle on the part of the Federal Reserve Board which will not be successful" by Roscoe Rau, executive vice president of the National Retail Furniture Association, during a talk here recently.

Rau expressed the opinion that the government would allow Regulation W "to die quietly on June 30."

Rau indicated that many furniture dealers did not like the extension of payments from 15 to 21 months.

Opinion among the local furniture dealer's group, which Rau addressed, was that it would have been better to reduce the down payment to 10% and keep the time payment limit at 15 months.

Dolmaten's Files Business Name

BUFFALO—A business name has been filed in the Erie County Clerk's office for Dolmaten's Hardware & Appliances, 1377 Abbott Rd., Lackawanna, N. Y., by Kirsan Dolmaten.

'Glutted' Market Forces Yale & Towne To Abandon Electric Iron Production

BUFFALO — The Yale & Towne Mfg. Co., which established a postwar small appliance manufacturing setup in Buffalo that employed nearly 300 at the peak of its operations, announced it is closing its plant here. The plant, at 2933 Main St., is for sale.

The company set up its plant here in 1946 for the production of electric irons and electric heating elements, a new line. At the peak, in February, 1948, 2,000 irons a day were produced.

"Operations at the Buffalo plant have been discontinued and the inventories are being liquidated," a company announcement said.

Production of irons was halted some time ago, the company explaining that "the appliance field is pretty well glutted." Employment has been tapering off since the peak in early 1948. There are only about 30 employes left at the plant and these are engaged in clean-up operations.

President Calvert Carey of Yale & Towne said that a reduction in company earnings last year was attributed "in part, to losses incurred in the electric iron and heating element businesses. Late in the year, it was decided to withdraw from the manufacture and sale of these products."

Price-Fixing Charge--

(Concluded from Page 1, Column 2)

"In our opinion, Uptown Appliance & Radio has been destroyed by a conspiracy in restraint of trade."

Firms against whom the charges have been filed include Flint Distributing Co.; Reed Bigelow; The Paris Co.; Darling Appliance Department; Zion's Cooperative Mercantile Institution; E. M. Royle Radio Co., Inc.; Warren Radio Co.; Robert Nevins; Salt Lake Hardware Co.; and Graybar Electric Co.

The complaint charges that the 10 firms entered into "a combination conspiracy, confederation, agreement, and understanding with the express purpose, intent, and effect of destroying plaintiff."

Small Refrigerator Fits Under Drainboard

Designated as Model NB-4, this 4-cu. ft. G-E refrigerator has a 34½-in. height that permits the model to fit under a 36-in. drainboard. Vent in front of cabinet provides ventilation so that refrigerator can be built in at top, back, and sides.

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G-E Apartment-Size Model Provides Vent In Front

BRIDGEPORT, Conn. — General Electric's 4-cu. ft. apartment-house-size refrigerator is being made available for general retail distribution, it has been announced by A. G. Chaffer, sales manager of the household refrigerator division.

The refrigerator carries a recommended national retail price of $232.

Increased demand for a small refrigerator for use in summer cottages, private offices, rumpus rooms, and butlers' pantries occasioned the decision, Chaffer said. In the past, use of the refrigerator was restricted to small apartments and 60-in. kitchen installations, for which the unit was originally designed.

Unusual feature of the refrigerator, designated the NB-4, is that it can be completely built in at top, back, and sides, since ventilation for the mechanism is handled through a vent in the front of the cabinet. The 34½-in. height of the all-steel cabinet permits installation under a standard 36-in. drainboard or kitchen work surface.

Operation of the refrigerator is controlled by a single control which permits a wide range of freezing speeds, according to G-E. Moderate refrigeration continues even during defrosting, the company said. Under the ice-cube compartment, which holds two trays, is a glass chiller tray for meats or beverages.

Bendix Plans Expanding Line Despite Profit Dip

SOUTH BEND, Ind.—The year 1948 was a year of adjustment for Bendix Home Appliances, Inc., according to Judson S. Sayre, president, who recently reported net sales of the company and wholly-owned subsidiaries for the year at $50,179,423, some $30,000,000 under the $81,325,285 reached in 1947.

Net profit for 1948 was reported at $4,001,180, or $3.78 per share, in 1948 as compared with $10,552,728, or $10.08 per share in 1947.

In his report to stockholders, Sayre stated, "Our line of products will be further expanded by the addition of a completely new type of automatic washer which will be made available in the summer of 1949. . . .

"Considerable development work was undertaken on this particular unit during the year and now the tooling is completed and production facilities organized."

Bendix acquired the patents on the new type washer from the H. J. Rand Washing Machine Corp.

Looking to the future, Sayre declared, "While prices are likely to be lower, there is no indication of a change in our economy that will restrict the sales of automatic laundry equipment efficiently produced and properly distributed at competitive prices."

Products of
Refrigeration Research
are
Quality Products
— Always —
Refrigeration Research
10 to 23 Doris
Highland Park 3, Michigan

Here they are!

Those Fabulously Fine New Oasis Electric Water Coolers For 1949!

Yes . . . sing out the news! It's "Oasis again — better than ever this year" — with 3 brand new models . . . each powered by a revolutionary new Oasis sealed static condensing unit! They're as quiet as a whisper — the fan has been eliminated — they consume less current — they reduce maintenance to a bare minimum! A total of 18 models . . . a correct type and size for every office, store, waiting room, theatre lobby, factory, school and hospital . . . are available NOW at exciting new prices through your authorized Oasis distributor. See him today . . . or write for the whole story!

THE EBCO MANUFACTURING COMPANY
407 W. Town Street Columbus 8, Ohio

These 3 Models Incorporate The Sensational NEW OASIS STATIC CONDENSING UNIT!

1 A NEW HIGH IN OUTPUT
2 A NEW LOW IN MAINTENANCE
3 A BETTER COOLER FOR LESS MONEY

OP-10

OB-RS OP-5S OB-2S

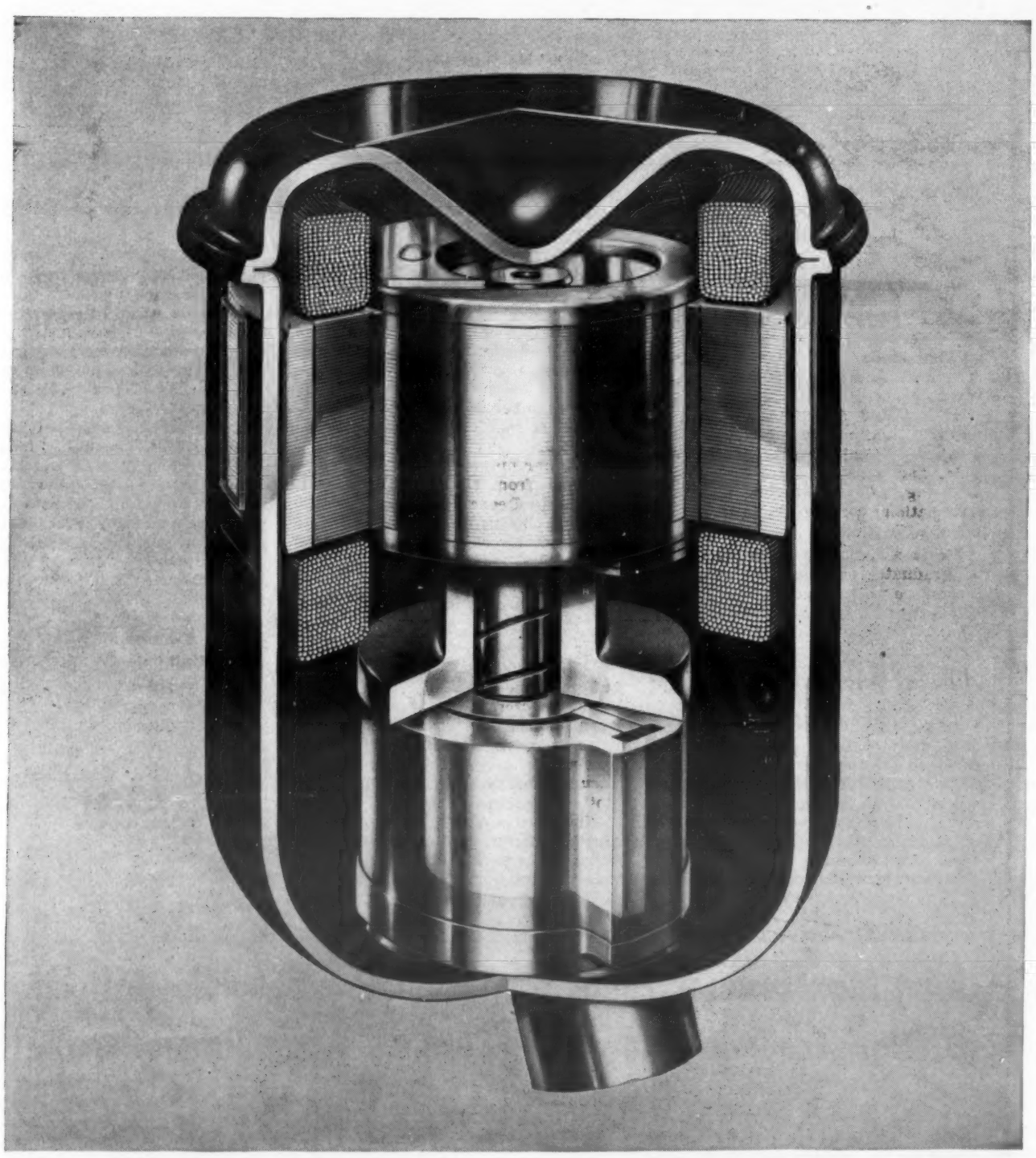
OASIS
THE EBCO MANUFACTURING CO.

THE WORLD'S LARGEST MANUFACTURER OF ELECTRIC DRINKING WATER COOLERS

Why the Meter-Miser makes it easier to sell FRIGIDAIRE

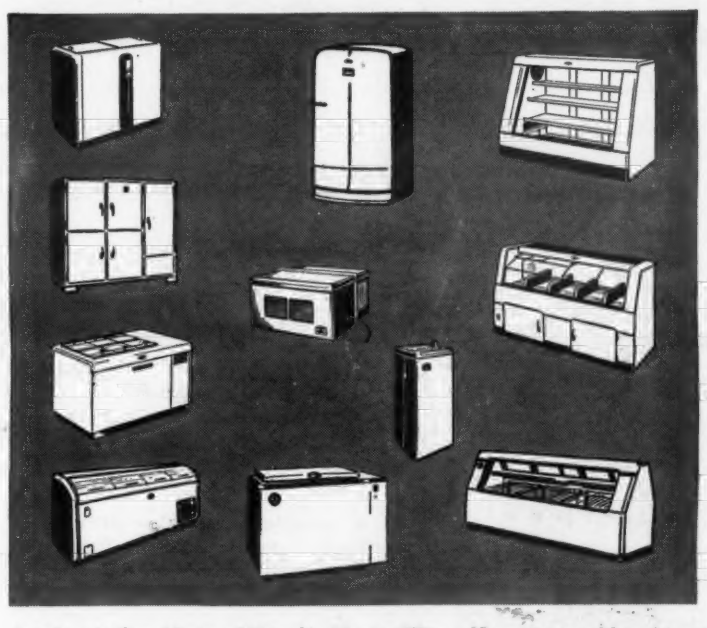
Every Frigidaire dealer has one mighty important selling advantage over all his competitors—the one-and-only Frigidaire Meter-Miser compressor, simplest refrigerating mechanism ever built.

This most famous of all cold-making mechanisms greatly simplifies the job of selling Frigidaire refrigeration and air conditioning products. The Meter-Miser story is easy for salesmen to tell convincingly. And customers know the Meter-Miser's reputation for dependability and economical performance, are quickly convinced that it is superior to all others. This is a selling advantage of a mighty practical kind. And it is just one of many reasons why the Frigidaire franchise is one of the most valuable in the industry.



Simplest Refrigerating Mechanism Ever Built—that's the Meter-Miser. But simplicity is just part of the reason for the Meter-Miser's economical, trouble-free operation. Its parts are made of the finest available materials, finished so smoothly they will cling together as though magnetized and built to tolerances so accurate they can be measured only with electronic instruments. And look at these other convincing sales points:

• Sealed-in-steel and oiled for life • No belts, no pulleys, no crankshafts • Wonderfully compact and light • Quiet, almost vibration-free operation • Backed by 5-Year Warranty • Performance proved in millions of installations.



Look at the Meter-Miser's Versatility. No other cold-making mechanism is standard equipment in so many different kinds of refrigeration and air conditioning products. This sharply reduces the amount of specialized knowledge necessary to sell and service Frigidaire equipment. The Meter-Miser is now available in sizes up to ½ H.P. for self-contained or remote installation.

Continuous, Heavy Advertising. Fifteen years of consistent promotion have made the Meter-Miser a national byword for superior dependability, economy, performance. This advertising has helped to increase public demand for Frigidaire, and has made all Meter-Miser equipped Frigidaire products easier to sell, according to Frigidaire dealers.

Depend on FRIGIDAIRE to do things right

see your "DETROIT" WHOLESALER for Expansion Valves Solenoid Valves Controls

"DETROIT"

2810

DETROIT LUBRICATOR COMPANY General Offices: 5900 TRUMBULL AVENUE DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

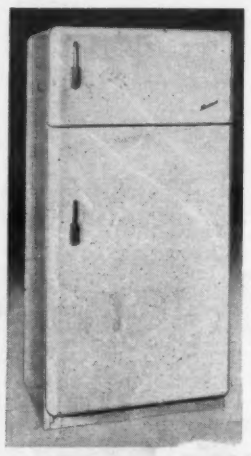
Canadian Representatives—RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories

"Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

"DETROIT"

EXPORT DEPARTMENT—Box 218, Ridgefield, New Jersey



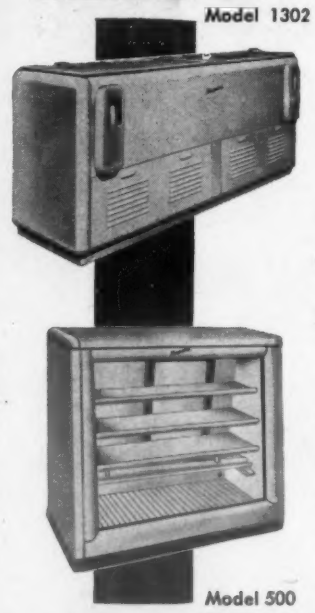
THE PROFIT LINE FOR '49

Howard

REFRIGERATION SYSTEMS

A complete selection of refrigerators awaits your inquiries. These systems are designed for farm, city, or commercial uses.

Model 1302



Model 500

• Model 1302, two temperature refrigerator, size 67½" high, 32" wide x 52½" deep. Ten cubic feet of regular refrigerator space, 3 cubic feet of frozen food locker storage. Five ice cube trays, 10 pounds of ice per freezing. Two porcelain vegetable crisper drawers. One ¼ H.P. semetric unit, for both temperatures.

• Dry beverage coolers, all self-contained, can be used as a wet cooler also. Made in a wide range of popular sizes and capacities for both electric and ice coolers—from 5 cases to 30 cases.

• Model FV4 foot and FV6 foot full vision display cases, 30" deep, 50" high. Porcelain front and top; also, porcelain shelves. Triple glass thermopane display, fluorescent lighting. Made remote and fully self-contained ready to plug in.

• All aluminum clad Walkin Coolers and freezers. Wide range of sizes—equipped with solid or glass door reach-in service doors.

• 13 to 65 cubic foot capacity Reach-ins with solid or glass doors, blower coil, ice maker, and baker dough retarder models.

• Ice cream cabinets and freezers—a wide range of sizes and capacities.

• Refrigerators from 3½ to 10 cubic foot capacity.

IMMEDIATE SHIPMENTS.

Dealers, distributors, and wholesalers will marvel at the sales advantages of Howard's outstanding refrigeration systems.

Howard

WRITE FOR COMPLETE CATALOG

HOWARD REFRIGERATOR CO., INC.
507 ARCH ST., PHILADELPHIA 6, PA.
Cable Address: HOWFRIG

Dealer Spreads Down Payment over 3 Mos. To Aid Sales

UTICA, N. Y.—Ribyat Bros. here, went after spring refrigerator business with an unusual promotion under which the store suggested that customers order in February for May delivery and get away from the down payment requirements of Regulation W.

Under the plan, customers were invited to pay $5 down in February and $14 each month in March, April, and May, the refrigerator to be delivered and installed in May. Starting in June, customers could take 15 months to pay.

In a large newspaper advertisement launching the promotion, the store said: "Yes, while everybody's talking about $50—$60—$70 required down payments under Regulation W, Ribyat Bros. announces a sensational February purchase plan for Spring delivery, requiring only $5 down guaranteeing May delivery of a new 1949 model, and protecting you against rising prices."

Of course, what actually happened was that the customer made his own down payment of $47 spread out over a period of more than three months. This apparently made the promotion legal within the requirements of Regulation W.

Philco Corp. Names Bailey Assistant Adv't Manager

PHILADELPHIA — Edward B. Bailey has been appointed assistant advertising manager of Philco Corp., it was announced by John F. Gilligan, advertising manager.

Bailey has been acting as account executive on the Philco account for the Hutchins Advertising Agency. He will serve as executive assistant to Gilligan on all phases of Philco's national advertising, and will supervise the creative activities of the advertising department.

One of the veteran advertising executives of Philadelphia, Bailey was the director of marketing and consumer research of F. Wallis Armstrong Co., now Ward Wheelock Co., for 10 years. He was assistant to the president and directed all consumer research and merchandising for the Benjamin Eshleman Co., Philadelphia, and served as director of advertising, sales promotion, and public relations for the Davison Chemical Co., Baltimore.

He is a native of Johnstown, Pa., a graduate of the University of Notre Dame, as well as a former secretary of the national Notre Dame Club.

Admiral Sets 20-Cent Dividend

CHICAGO—The board of directors of Admiral Corp. has declared a dividend for the first quarter of 1949 of 20 cents per share of common stock of the corporation payable to stockholders of record at the close of business March 22, according to Ross D. Siragusa, president and chairman of the board. Payment date of the dividend is scheduled for March 31.

Now with Super-Cold

R. E. RISTOW

Former president of Drayer-Hanson, he is now head of Super-Cold's Heat Exchange Div.

Falling Demand Hits Gas Range Production

NEW YORK CITY—A lack of retail re-orders has caused gas range manufacturers to considerably reduce their output—estimated at 50% by one manufacturer.

Despite the admitted sharp slump in their business, two manufacturers —Arthur Stockton, president of the American Stove Co., and Stanley Hobson, president of George D. Roper Corp.—declared that their firms contemplated no price reductions on their products.

Hobson emphasized, however, that the Roper firm makes no attempt to control the list price of its product.

NARDA Plans Membership, Board Meetings During July Mart In Chicago

CHICAGO—The executive committee of the National Appliance and Radio Dealers Association recently did the following:

1. Directed the managing director to issue a call for a meeting of the association's board of directors on Sunday, July 10.

2. Authorized a meeting of the membership in Chicago on July 11 in conjunction with the Chicago Market.

3. Approved calling divisional membership meetings to be held next fall in the leading wholesale distribution points throughout the country.

Clif Simpson, managing director of the organization, said that the July membership meeting will convene at an 8 a.m. breakfast which will be addressed by a leading industry speaker. The speaker will inform dealers "as to the exact mid-year position of the appliance-radio industry and as to what may be expected during the last half of 1949," he stated.

Panel discussions on two different subjects will follow.

Purpose of the proposed divisional membership meetings will be to bring the association closer to members and to begin the building of better relationships between all dealers and the wholesalers and manufacturers' representatives serving them, Simpson declared.

These meetings will convene at a noon luncheon, carry through with three panel discussions during the afternoon, and adjourn after a social, informal dinner.

Only Water Heater Sales Gain In Chattanooga Area for January Period

CHATTANOOGA, Tenn.—Electric water heaters were the only major appliance to show a sales gain in January as compared with December, a compilation of local dealer sales by the Electric Power Board of Chattanooga has revealed.

Water heater sales were 234% over December and 150% over January of last year. A total of 445 units was sold.

All other major appliances showed losses of from 17 to 72% as compared with December. Clothes washers were down 17%, home freezers 18%, vacuum cleaners 21%, clothes driers 22%, ranges 27%, refrigerators 40%, and ironers 72%.

As compared with January, 1948, water heaters, vacuum cleaners, and clothes driers were moving at a faster pace. Home freezer sales were slightly up. But refrigerator, range, ironer, and clothes washer sales were sharply down from last year. The percentage of loss on the latter items was from 34% on ranges to 60% on clothes washers.

Average unit price of all appliances except vacuum cleaners and clothes washers was approximately the same as last year. Average price of vacuum cleaners is down about $13 and the average price of clothes washers is up about $76.

The January unit sales with average unit price and total sales value follows:

• • •

Appliance	Units	Average Unit Price	Total Sales Value
Refrigerators	195	$ 272.79	$53,194.05
Home Freezers	13	396.41	5,153.33
Ranges	240	243.26	58,382.40
Water Heaters	445	117.95	52,487.75
Ironers	13	189.73	2,466.49
Vacuum Cleaners	725	73.16	53,041.00
Clothes Washers	195	192.15	37,469.25
Clothes Driers	14	229.95	3,219.30
Air Conditioning Units	7	2,396.16	16,773.00
Refrigerators, Commercial	5	865.60	4,328.00
Freezing Cabinets	1	394.75	394.75
Beverage Coolers	22	268.01	5,896.23
Water Coolers	2	222.85	445.70

Using Manufacturer Funds for Installation Subsidies Instead Of 'Flat' Trade-In Allowances Seen as Wiser Promotional Effort

SPOKANE, Wash.—A suggestion that appliance manufacturers use promotion money that they might spend on "across the board" trade-in allowances as an installation subsidy instead was made by the Inland Empire Electrical Dealers Association recently.

The same announcement that carried the suggestion also reported that the association's board of governors had adopted two resolutions. One opposed trade diversions and discounts to anyone other than franchised dealers.

The other pointed out the "prime importance" of "the maintenance or provision of adequate service facilities by all franchised dealers in the interests of customers and to insure satisfactory fulfillment of guarantees."

The association granted that there was nothing unethical or intrinsically harmful about an "across the board" trade-in plan offering the public a substantial, fixed allowance for any appliance of a certain type traded in on specified new models.

When the manufacturer assumes or shares the loss involved, the offers are a great deal better for the retailer than a flat price-cut without reimbursement for inventory losses, the association said.

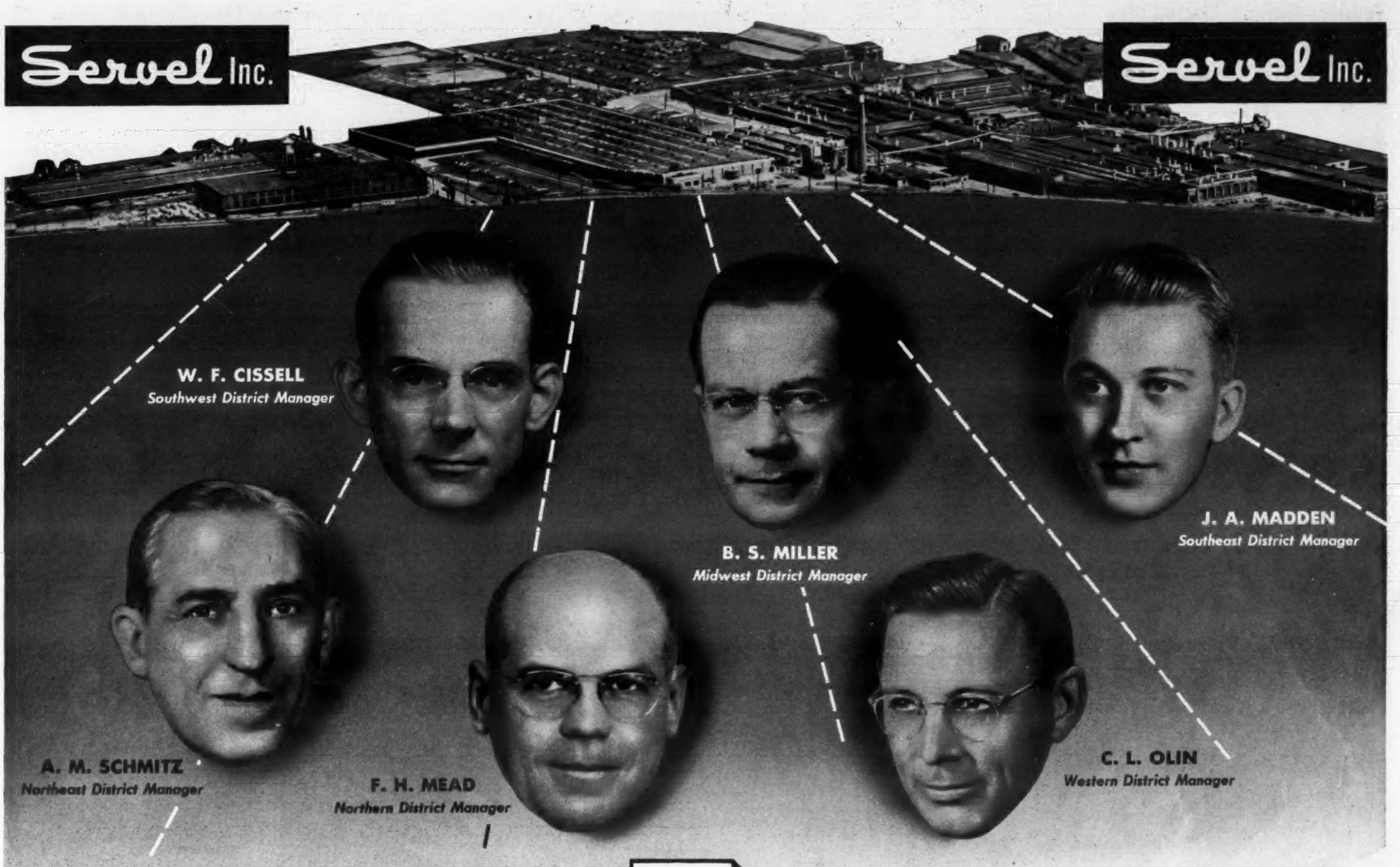
It warned, however, that the "across the board" trade-in offer, whether it originates with an individual dealer or with a manufacturer, presents one danger. It encourages a trend toward the evaluation of trade-ins on the basis of promotional value alone, rather than on the basis of actual resale value of the old appliance.

"In some cases," it said, "manufacturers might be able to find sounder methods of stimulating sales through special offers. The available promotion money might be used as an installation subsidy, for example, in the case of ranges or water heaters.

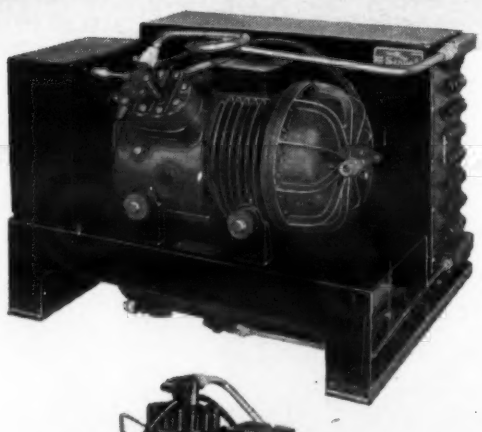
"No individual dealer can possibly afford to offer such a subsidy or credit on installation on a product on which he has a normal margin. But the manufacturer who wants to spend money on a special offer could make such a subsidy available, frankly announcing it as a special promotional offer, without creating a false perspective or arousing the public's suspicions as to his motives."

The resolution on trade diversion, adopted by the board of governors on Jan. 19, reads, in part, as follows:

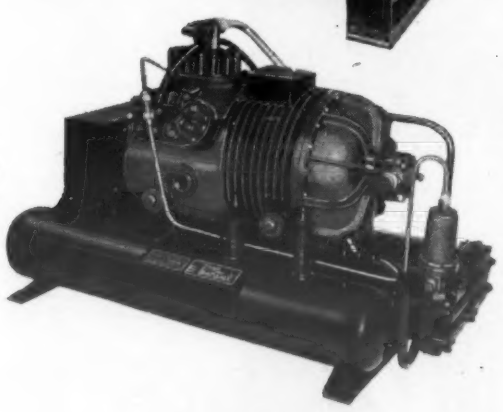
"Be it resolved that this organization is opposed to trade diversion in any form whatsoever and that it is specifically opposed to the granting of discounts on electrical appliances by wholesalers or jobbers to any firms, individuals, institutions, groups, government agencies or their political subdivisions, electric utilities, whether private, public or municipal, or to any other group or business other than franchised retail dealers."



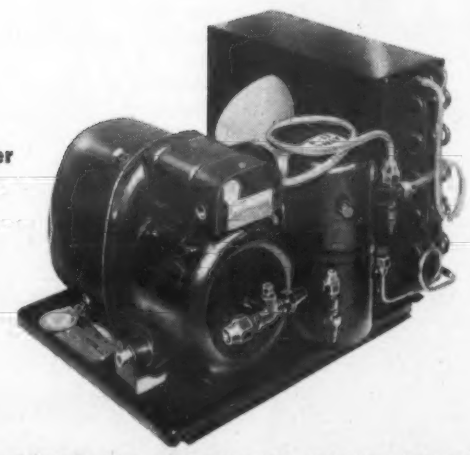
The organization behind these men helps to build your refrigeration business



Four-Cylinder Supermetic



Six-Cylinder Supermetic



Twin-Cylinder Supermetic

SERVEL SUPERMETIC FEATURES THAT BUILD SALES PROFITS

- Forced-Feed Lubrication
- No Oil "Slugging"
- Designed to Save Space
- Fully Wired—Easy to Install
- Wide Range of Sizes
- Low and Medium Temperature Models—¼ HP thru 3 HP

Pictured above are the District Managers of Servel's Electric Refrigeration Division whose job is assisting customers in selling and maintaining one of the world's finest refrigeration products—the Servel SUPERMETIC.

Back of these men is one of the industry's most modern production plants, manned by an organization whose efforts are devoted to serving customers—helping them to make more money, assisting them in the building of a more successful refrigeration business.

When you sell SERVEL condensing units, you enjoy many important advantages. Servel offers you—

(1) A quality product—Precision-built to highest standards and unsurpassed in performance and sales-building features.

(2) Engineering assistance—A fully equipped testing laboratory where fixture manufacturers may check performance of their products. Servel engineers provide helpful suggestions wherever design changes may seem desirable.

(3) Field service help—Factory Service Engineers help you train servicemen. Instruction manuals and parts reference data make maintenance work easier, build profits for your Service department.

(4) Applications engineering—A special service that helps customers determine their condensing unit requirements for unusual applications.

(5) Sales aids—Catalogs, specification data, descriptive literature to make selling easier, put profit dollars in your pocket.

CALL ON SERVEL

Every member of Servel's sales, engineering and service organization is ready to help you build YOUR refrigeration business. If we can help you then write, phone or wire Servel, Inc., Electric Refrigeration Division, 2903 Kentucky Ave., Evansville 20, Indiana.

SERVEL SUPERMETICS

FOR EVERY COMMERCIAL REFRIGERATION REQUIREMENT

Fedders-Quigan Elected Member of Water Cooler Product Section of REMA

WASHINGTON, D. C.—The Fedders-Quigan Corp., was elected to membership in the water coolers product section of Refrigeration Equipment Manufacturers Association at its last meeting here.

A committee consisting of L. C. Berken, C. F. Hansel, and S. Whitt, was appointed to work together in supplying material to Refrigeration Service Engineers Society on the products made by members of the drinking water cooler manufacturers association.

A. A. Zollo of Filtrine Mfg. Co. was appointed as publicity chairman of the product section.

A. R. Benua, president of Ebco Mfg. Co., was nominated to fill the unexpired term of H. F. Hildreth, as a director of REMA, representing the water coolers product section.

L. C. Love of Ebco was requested to make a survey of standards in designating the gallon capacity of water coolers and report his findings and recommendations at the next meeting.

It was also decided to hold three meetings a year in the future, during the months of February, May, and October.

Morgan Is Acting Ad Head At Penn Electric Switch

GOSHEN, Ind. — Carlos Morgan has been appointed acting advertising manager for Penn Electric Switch Co., according to R. H. Luscombe, general sales manager. He succeeds J. R. Netedu, former manager, who resigned.

Morgan, who has been with the Penn Electric Switch Co. for the past 13 years, was formerly assistant advertising manager.

Adams Heating Co. Established

BUFFALO—Eddie Adams Plumbing & Heating Co. has been established at 15 Ullman St. by Elias E. Adams.

New Processes of Milk Freezing and Storage Developed In Michigan, Indiana May Revolutionize Dairy Distribution

DETROIT—Two developments in the dairy industry which are of direct interest to the refrigeration industry came to light recently.

1. An Indiana dairy farmer and a former Department of Agriculture scientist revealed that they have nearly perfected a "revolutionary" process for canning fresh milk. They believe this process will permit distribution and storage of milk without refrigeration.

2. A new process for condensing fresh milk has been worked out at Michigan State college's agricultural experiment station. The condensed milk could be preserved for long periods by freezing, according to an official of the station.

Jack Stambaugh, Valparaiso farmer, and Dr. Roy Graves discovered the process for canning fresh milk while attempting to find a way to avoid the "punishment" milk now undergoes in being pasteurized and bottled. Here is how it works:

Milk is drawn from the cows under vacuum by milking machines and flows through stainless steel tubes to a large vat. Still at the cow's body temperature, the milk then moves into a homogenizer and from there to a new type of pasteurizer.

The milk is in this machine for only one second. Here, it is subjected to violent agitation at a temperature of 190° to halt enzyme action and pasteurize without burning.

Next, the milk goes to a canning machine where it flows into sterilized cans in a chamber. The chamber contains nitrogen gas, which prevents oxygen from acting on the milk. Finally, the cans of milk move into a sterilizer.

At no time is the milk exposed to the air, which would oxidize it, alter its flavor, and stimulate the growth of bacteria.

Under present methods, milk is rapidly cooled from 96° (the cow's body temperature) to 40° on the farm. It is then cooled again at the dairy plant. Its temperature is next quickly raised to 161° in the pasteurizer, after which it is homogenized, cooled, and bottled.

One observer said the canned milk is "stable and well flavored and can be shipped all over the country without losing flavor, becoming contaminated, or going sour." After tasting milk which had been canned a month earlier and which had been opened and stored in an ordinary refrigerator for a week, the observer reported that the milk "tasted the same as that in a fresh bottle from the dairy."

'FRESH' MILK IN CANS OR . . .

Radical changes in the dairy business are foreseen as a result of the discovery. According to Stambaugh and Graves, their method will enable housewives to buy several cans of milk at a time from grocers' shelves, thereby eliminating the need for dairies to maintain home delivery service. Dairies may go into the canning business when the process is perfected for commercial use, they believe.

Stambaugh and Graves are now trying to find the type of can and lacquer for the can's interior which will permit keeping the milk indefinitely. Continental Can Co. has installed a canning machine at the Stambaugh dairy and cans of fresh milk are being tested at the Continental research laboratory in Chicago.

The process developed at Michigan State college for condensing fresh milk reduces the bulk of such milk by two thirds and thus makes distribution easier and cheaper, according to Dr. Clifford Hardin, assistant director to MSC's experiment station.

Under this method, the milk is condensed by a standard vacuum process. It is restored to its original form by the addition of ordinary tap water, and is unaffected by chemically-treated water, it was claimed.

. . . MILK IN POWDERED FORM

Dr. Hardin said the milk can be distributed in paper cartons or bottles, does not taste like canned condensed milk, and can be kept as long as fresh milk.

Asked about the Indiana process, Dr. Hardin said he doubted that it would revolutionize Michigan's dairy industry. The equipment needed for the Stambaugh process would probably be too expensive for small producers, he stated, explaining that most middlewest farmers keep small herds.

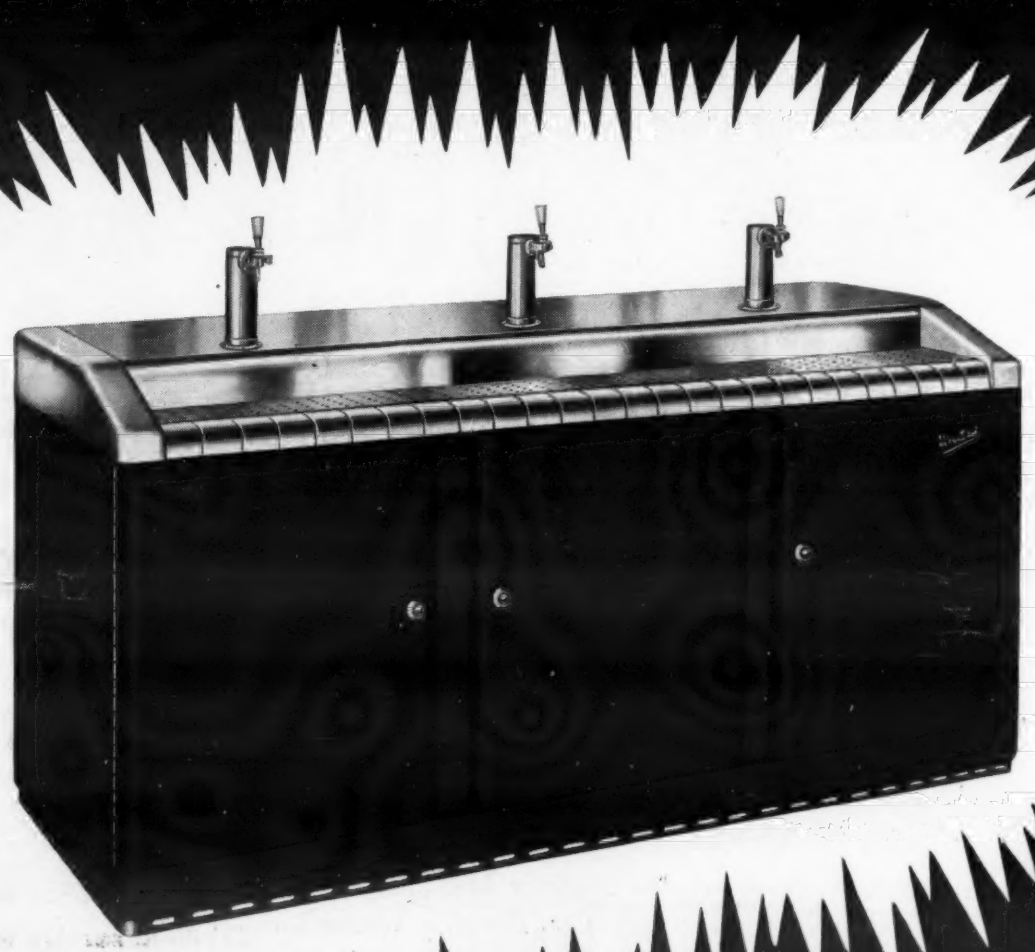
Pointing out that the three problems of milk distribution are the bulk of whole milk, unwieldy containers, and refrigeration, Dr. Hardin said: "Stambaugh claims he has beaten the refrigeration and container problem, but his process does not affect the bulk of the milk."

Bush Mfg. Co. Schedules Payment Of 2 Dividends for April 1

WEST HARTFORD, Conn.—Board of directors of Bush Mfg. Co. has voted to pay a dividend of 28⅛ cents per share on 4½% cumulative convertible prior preferred stock and 31¼ cents per share on 5% noncumulative preferred stock, E. M. Flannery, secretary, has announced.

Payment will be made on April 1 to stockholders of record March 16, he said.

"RADIANT BEAUTY PLUS!"



5 YEAR WARRANTY
. . . on all hermetically sealed refrigeration units.

IN THE NEW
United KOOLMASTER
Keg Cooler and Beer Dispenser
DESIGNED, ENGINEERED, MANUFACTURED — HUDSON, WISCONSIN

● Radiant beauty truly describes the New United Koolmaster . . . its brilliant stainless steel top contrasts most attractively with the soft brown du Pont Dulux long wearing baked enamel finish.

● Years of satisfying trouble-free service are assured, due to the *ALL STEEL* construction of the Koolmaster and the rigid testing this fine product is subjected to at the factory.

● The Koolmaster is also available in an all stainless steel exterior at a slightly higher price.

● Thermostatic control, custom designed cooling coils, efficient circulating blower and more than adequate extra-heavy insulation combine to insure a CONSTANT 40° temperature at all times.

● The Koolmaster is one of the *first* to make their self-contained condensing unit models a compact, one piece unit . . . gives greater space saving under back bar, more pleasing overall appearance.

● Two-keg and three-keg sizes designed with self-contained condensing units or for remote control.

New . . . ADDED CONVENIENCES
New shiny chrome "push-button" door latches are built flush with cabinet, providing easy and safe access.
New full length concealed hinges are of heavy duty design for long trouble-free service.

Compare point for point . . . compare prices . . . and you'll buy United!
FOR FURTHER INFORMATION WRITE
UNITED REFRIGERATOR COMPANY • HUDSON, WISCONSIN

40 Years of know how
TYPHOON Air Conditioning UNITS
Backed by a program of Salestraining, National Advertising, Dealer Aids.
1909 1949

1½ to 10-ton units
TYPHOON Air Conditioning Co., Inc.
794 Union St. • Brooklyn 15, N. Y.

BAKER

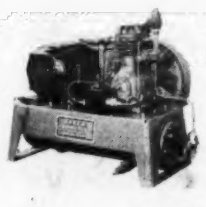
REFRIGERATION SINCE 1905

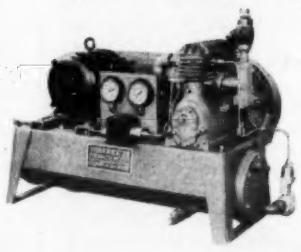
ENDURING QUALITY

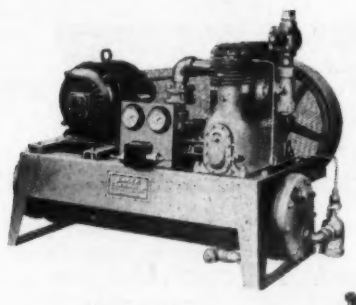
BAKER

AIR CONDITIONING AND REFRIGERATION

in Freon and Ammonia







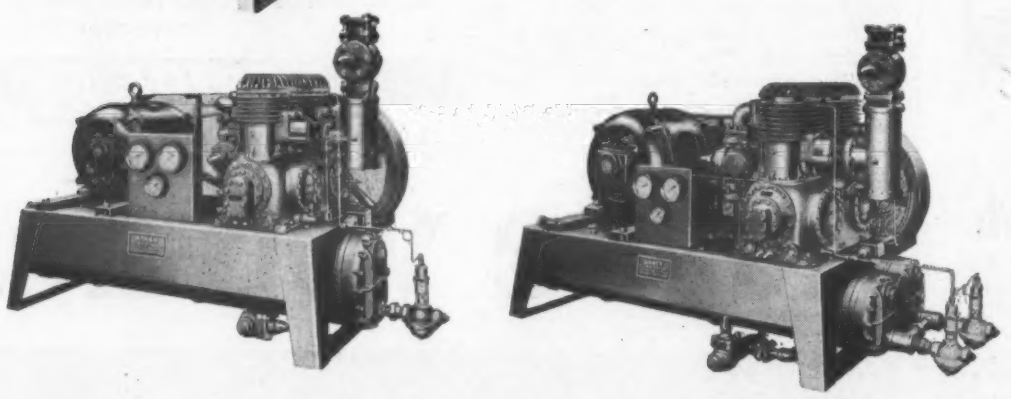
BAKER DISTRIBUTORS

can now sell

BAKER COMPRESSOR and CONDENSING UNITS in *Freon* ranging from ½ H. P. to 60 H. P.

Baker today offers its Distributors one of the widest lines of Freon equipment available anywhere. Compressors, compressor units, and condensing units in a complete range from ½ to 60 h.p.; also accessory equipment including evaporative condensers, coils, valves and fittings.

This bigger Freon line is but one of the many broad features of the BAKER franchise — that means *more, bigger* and *better* jobs for Baker Distributors in air conditioning and refrigeration.



In Ammonia, Baker offers units from 2 to 125 h.p.; Booster Compressors from 2 to 40 h.p., and all types of equipment, coils, valves, etc.

Certain territories are open to well-established Distributors looking for a wide line and attractive franchise.

Write for literature
BAKER "ICE-FLO"
The crystal-clear ice cube machine

BAKER REFRIGERATION CORPORATION

(Formerly BAKER ICE MACHINE CO., INC.)

General Offices: South Windham, Maine • *Factories at* Omaha, Nebraska *and* South Windham, Maine

Miller Heads Contractor Group In Rockford, Ill.

ROCKFORD, Ill.—Formation of a local association of air conditioning and refrigeration contractors to be headed for the coming year by Lester L. Miller of Miller Engineering Co. has been announced here.

The new group immediately applied for affiliation with the National Association of Refrigeration Contractors, it was said. It becomes the 29th local affiliate of the national association.

Other officers elected were E. Reynolds, vice president; and James Best, of Best Refrigeration Co., secretary-treasurer. Directors are Roy Shipman, and R. C. McCarthy.

Regular meetings will be held on the fourth Thursday of each month.

Percy Wilson To Open Sales, Service Firm In Cumby, Tex.

CUMBY, Tex.—Percy Wilson, who was formerly in the refrigeration sales and service business here, and who was engaged in this business for a good many years, has a new building under construction at the corner of Live Oak and Earl St. He expects to be ready to open his new refrigeration sales and service business in this building about March 25, 1949.

To Have Air Conditioned Mayor

TAMPA, Fla.—Approval of appropriations for installation of a $3,000 air conditioning system in the mayor's office was given by the city finance committee.

S. Carolina Cotton Manufacturers Fight Bill To Require Air Conditioning In All State Mills

COLUMBIA, S. C.—John K. Cauthen, executive vice president of the Cotton Manufacturers' Association of South Carolina, said in an interview this week that "nothing short of decisive defeat of the bill (a proposed law to require South Carolina textile manufacturers to air condition their plants) can repair the damage already done to South Carolina industrial progress."

The bill is scheduled for a decisive second reading in the House of Representatives.

Criticizing the House Labor, Commerce, and Industry committee for its favorable majority report on the bill, Cauthen said:

"No other state has such a law and it is significant that only a few weeks ago a committee of the Georgia House of Representatives rejected an identical bill by a 9-2 vote.

"North Carolina advocates of such legislation have failed even to get the bill introduced.

"Since news of the unfortunate action (of the committee) in South Carolina went out," Cauthen continued, "my office has received many anxious inquiries—not only from all over this state but from New England, New York, and elsewhere.

"The textile leaders want to know if it is possible that the South Carolina Legislature would adopt such a law. All I can tell them is that I hope not.

"The issue is a fundamental challenge to legislators who put the progress of the state ahead of other considerations.

"In 1948, the textile industry paid out in excess of $300,000,000 in wages to 130,000 workers in South Carolina. It paid approximately 65% of all corporation taxes to the state.

"If by one stroke the legislature adopts a bill which would cost the mills in excess of $50,000,000 as an immediate first cost, plus unestimated millions for operation and maintenance in years to come, and would hamstring them in competition with textile plants in neighboring states, it means the beginning of the end of the industry in South Carolina.

"Just a year ago a special committee of the House of Representatives, following a searching investigation of working conditions in textile mills throughout the state, reported back unanimously to the legislature that an air conditioning law was not feasible.

"It is just as easy for mills to be built in Georgia, North Carolina, Alabama, and other states as in South Carolina, and that is where the mills will be built if South Carolina adopts an air conditioning bill."

Norge Plans To Streamline Warm Air Heating Output

DETROIT — A two-fold program for streamlining production facilities and expanding the merchandising program of the Norge-Heat Div. of Borg-Warner Corp. to meet changing market conditions was announced here.

A decision to consolidate the manufacturing of all types of warm air home heating products in plants at Kalamazoo, Mich., and Ellwood City, Pa., was revealed by Howard E. Blood, president of the division. In the process, the division's plant at Hammond, Ind., will be closed.

"The consolidation of manufacturing facilities will enable us to expedite service to our customers and to offset the rising costs of materials and overhead," Blood said. "The Ellwood City plant, in particular, will give us quicker access to the eastern market.

"Our Norge-Heat line of home heating products will be considerably enlarged to include a complete new line of gas-fired air conditioning furnaces this year."

First of the new gas products to be released is the "super-package" air conditioning furnace requiring only slightly more than 2 sq. ft. of floor space.

Conditionaire, Inc., Announces Move to New, Larger Quarters

JACKSONVILLE, Fla.—Conditionaire, Inc., formerly located at 1328 San Marco Blvd., has moved to quarters in its own building at 702 Flagler Ave. The new building of stuccoed concrete block has floor space of 5,000 sq. ft. Richard K. Peck, Jr., is president of the firm.

Armstrong Co. Corkboard Price Cut Varies by Shipping Zone

LANCASTER, Pa.—A 10 to 15% reduction in the price of corkboard, effective on all orders received after Feb. 25, has been announced by the Armstrong Cork Co.

The range of the price reduction varies according to the shipping zones, the announcement said. All classes of trade and all types of the company's corkboard insulation are affected by the reduction.

British 'Caronia' Is Sixth of Cunnard Ships Conditioned by Carrier

SYRACUSE, N. Y.—With the installation of 12 independent air conditioning plants aboard the *Caronia*, Great Britain's new 34,183-ton luxury liner becomes the sixth member of the Cunard-White Star passenger fleet to be air conditioned by Carrier Engineering Co., Ltd. of London.

The company is the British affiliate of Carrier Corp. here.

The air conditioning systems serve the Balmoral dining salon, Sandringham dining salon, the first class lounge, the first class smoking room, the cabin class lounge, the cabin class smoking room and bar, the forward cocktail bar, the first class and cabin class barber shops and beauty salons, the hospital operating room, dispensary, and three general wards, the gymnasium, and medicinal baths, and ship's theater.

The *Caronia*, the world's largest passenger ship to be built since the war, has joined the regular North Atlantic run and also will serve as a cruise ship between New York and the West Indies during the winter season.

Other Cunard-White Star vessels which are Carrier equipped are the *Queen Elizabeth, Queen Mary, Mauretania, Media, and Parthia.* The latter two are combination passenger-cargo vessels, commissioned last year.

Harry F. Pitcher and R. F. Sheppard of Carrier Engineering Co., Ltd., London, were aboard the *Caronia* on its maiden voyage to New York.

Opens Albany, Ga. Branch

ALBANY, Ga.—Horne-Wilson, Inc., of Atlanta, wholesale air conditioning and home appliances concern, has opened a branch establishment here. L. L. Smith is manager of the branch.

In Ritz Theater Project 1 Building Leads To 2 Others

MINNEAPOLIS — Two buildings had to be constructed here to get one rebuilt theater equipped with its air conditioning system.

The Ritz theater in northeast Minneapolis was remodeled at a cost of $100,000 after a small building was constructed at the rear to house the heating plant. Another building went up to take care of the air conditioning plant, the 350-ft. artesian well, a blower, air washer, and filter panel.

Then workmen began tearing out the inside of the main building. When they finished, only parts of the four walls and roof remained.

The floor was removed to allow for a trench running from the air conditioning machinery to the front of the theater. The air forced into the building is filtered, washed, heated, and then lowered to the audience from the ceiling through an anemostat control system.

Minneapolis-Honeywell Reports Net Earnings of $5,942,008

MINNEAPOLIS — Minneapolis-Honeywell Regulator Co. has reported net earnings of $5,942,008 for the year ended Dec. 31, 1948 after providing $3,790,000 for taxes on income. Net earnings for 1947 were $6,693,509 after providing $4,381,100 for income taxes.

Net sales for 1948 were $57,600,527 compared with $60,596,021 the year previous, Harold W. Sweatt, president, stated.

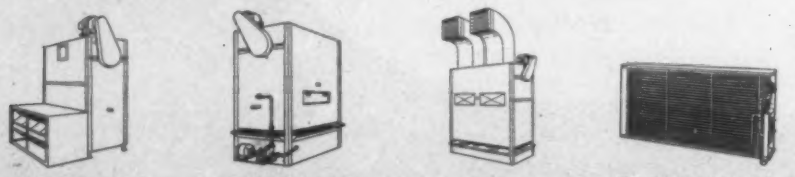
The 1948 net income was equivalent, after preferred stock dividends of $352,000, to $4.49 a share on the 1,243,800 shares of common stock outstanding with $5.10 a common share in 1947.

A Complete Unit for a Complete job

You're always *sure* you're getting the very best in efficient, economical packaged air conditioning when you specify Governair—the original patented design!

This complete unit is easy to install—requires only simple electrical, water and duct connections. Built-in Evaporative Condenser keeps water usage down to a minimum. Governair engineering assures correct co-ordination and balance of all functions. Generously proportioned heat transfer surfaces provide maximum performance and economy.

Choose Governair completely packaged air conditioners and you'll *always* do your best!



GOVERNAIR

NIAGARA
AEROPASS CONDENSER
FOR LOWER COST REFRIGERATION
...saves cooling water, prevents operating troubles, saves labor. It cuts the operating cost of freezing, cold storage or air conditioning. It reduces power bills because compressors run at lower head pressure. Write for Bulletin 103. Address Dept. AC.
NIAGARA BLOWER COMPANY
405 Lexington Ave. New York 17, N.Y.

REFRIGERATION AIR CONDITIONING HEATING PARTS and SUPPLIES
SERVICE THAT'S UNSURPASSED from the SUPPLY HOUSE THAT SERVICE BUILT
Dependable efficient same-day filling of orders has built our business ... our reputation. Keep your stocks complete this easy, speedy way ... just order from our FREE catalog. Saves you time ... energy ... money. Prices right. Wholesale only.
SERVICE SP PARTS CO.
2511 LAKE STREET MELROSE PARK, ILL.

Have you heard...

The story of AMCOIL's complete line of all copper welded cooling units. Write for bulletin.

TERRITORIES OPEN

Amcoil
REFRIGERATION · AIR CONDITIONING · HEATING

AMERICAN COILS COMPANY, 360 THOMAS ST., NEWARK 5, N. J.

Wilmington Electrical Trade Group Appliance Show Opens March 31

WILMINGTON, Del.—A three-day refrigeration and electrical show will be conducted by the Wilmington Electrical Trades Association from March 31 through April 2 at the Hotel DuPont here.

More than 50 members of the association, in cooperation with 10 manufacturers and six distributors, will participate in the show. The affair will feature displays of the latest models of major electrical appliances.

John S. Reburn and Royal S. Hull, both past presidents of the association, are serving as co-chairmen of the arrangements committee for the show. Also on the committee are Harvey Poole, George Reese, Leo Keil, Byron Atwood, president of the association, and William Fredericks, association treasurer.

Local distributors who will exhibit include Gerrett-Miller Co., General Electric Supply Co., Westinghouse Supply Co., Artcraft Electrical Supply, and Wilmington Jobbing & Distributing Co.

Out-of-state distributors who will participate include Raymond Rosen Co.; Trilling and Montague; Judson C. Burns Co.; J. J. Pocock Co.; Elliott Lewis Corp.; Altderfer Brothers; Motor Parts Co.; and the Philadelphia Wholesale Distributors.

Manufacturers Credit Association Reports Dealer Payments Prompt

CHICAGO—Major appliance manufacturers who had expected their collections on retail credit accounts to run into trouble after the first of the year have been pleasantly surprised, members of the newly formed Major Appliance Manufacturers Credit Association agreed at their monthly meeting here recently.

One member asserted that collections have been exceptionally good, while another stated that only one of 32 accounts has allowed a large percentage of its billing to get past due.

One reason offered for the good collection record was the fact that dealers have cut down the quantity of their purchases.

The association was formed about four months ago, it was stated, and is composed of credit representatives of four manufacturers. They are A. L. Murray of Duo-Therm Div., Motor Wheel Corp., who is chairman of the group; C. E. Bulloch, credit manager of Thor Corp.; L. W. Knister, assistant treasurer of Ironrite Ironer Co.; and Terry Freeman, credit manager of the Coolerator Co.

Pfeif Named Asst. to Sales Mgr. In G-E Appliance Dept.

BRIDGEPORT, Conn.—William J. Pfeif, formerly supervisor of employes service for the General Electric appliance and merchandise department, has been appointed assistant to the general sales manager of the department.

Pfeif joined the company as an accounting clerk in 1940 following his graduation from the University of Wisconsin. He subsequently held a number of positions in the personnel and educational sections of the appliance and merchandise department.

IEEDA 1948 Sales Show Freezers, Ranges, Refrigerators Among Fastest Moving Items

SPOKANE, Wash.—Electric range sales in the Inland Empire area served by the Washington Water Power Co. established an all-time high during 1948, the utility reported.

Refrigerators, home freezers, washers, and clothes dryers moved in larger quantities during last year than they did in 1947, the utilities figures disclosed. Water heater and ironer sales did not measure up to 1947 standards.

The power company stated that 10,403 electric ranges were sold in 1948 as compared with 8,605 in 1947. Dollar volume of range sales was $2,392,620 last year, a gain of $757,740 over 1947.

Refrigerator sales totaled 10,154 units, which was 10% over 1947. The dollar volume increase was $710,770 over 1947.

Home freezers, with total unit sales of 1,642 were 9% over the preceding year. The dollar volume gain was $45,395.

A total of 10,100 washers were sold at a dollar value of $1,665,685. This was 6% more units and $601,389 more than in 1947. Automatic washer sales increased in percentage of total sales each month of the year, the utility noted.

Unit sales of clothes dryers doubled 1947 sales with 478 units sold in 1948. Approximately 80% of total sales were made in the last five months of the year.

Ironer sales numbered 1,731 units as compared with 1,885 in 1947, a decrease of 8%. However, total dollar volume in 1948 exceeded 1947 by $95,503 due to customer preference for the deluxe or cabinet type models, the utility explained.

Electric water heater sales showed a 7.8% decrease from 1947. They totaled 6,573 units last year. Total dollar volume sales, however, exceeded 1947 by 5%, indicating larger sizes were being sold at higher prices.

Davison Is Sales Head of Williams Oil-O-Matic Div.

BLOOMINGTON, Ill.—E. H. Davison has been appointed general sales manager of the Williams Oil-O-Matic division of Eureka Williams Corp. it was announced recently by H. W. Burritt, president.

Davison, who has been associated with Oil-O-Matic for many years, was formerly manager of heating sales. In his new capacity Davison assumes the dealer-distributor sales supervisory duties of W. A. Matheson, whose resignation as executive vice president of the corporation became effective Feb. 18.

Albany Store Gives Aluminum Cookware with Range Purchase

ALBANY, N. Y.—Boulevard Appliance Co. here, went after range business with a promotion in which it offered a four-piece set of aluminum cookware, valued at $17.50, with each purchase of gas or electric range.

Home Appliance Dealers Organize In Buffalo Area

BUFFALO—The Erie County Appliance Association has been organized by leading appliance dealers in the Buffalo area with three principle aims:

1. To give service to members of the organization.
2. To give service to consumers.
3. To hold consultation with sources of supply to assure more economical distribution of appliances to the benefit of the consumer.

At its organizational meeting in the Buffalo Athletic Club, the new group named Al Kime, Al Kime Appliances, as temporary chairman.

Ed Maisel, Ed Maisel's Furniture & Appliance Co., was named chairman of publicity, and George A. Lambrix, George A. Lambrix Appliances, was named chairman of the membership committee. Officers will be elected at the next meeting of the group.

Maisel announced that the group is now in the process of drawing up a constitution and code of ethics.

INTERNATIONAL HARVESTER Dealers are Cheering-

INTERNATIONAL HARVESTER REFRIGERATOR
look at all the food it holds-
... MORE SPACE
bigger freezer-locker
roomier meat drawer
more crisper space
more shelf area
The center of attraction at our house!
INTERNATIONAL HARVESTER REFRIGERATOR
—draws friends and family like a magnet—it's so marvelous! Extra-big inside
to hold more . . . special features for extra convenience . . . food protection!
IN REFRIGERATOR RECIPE
French Strawberry Pie
INTERNATIONAL H
Refrigerators • Fre

HUGE NATIONAL ADVERTISING CAMPAIGN STARTS IN MARCH!

First of the exciting, full-page 4-color ads to run in America's leading national magazines this Spring, dramatizing the many features of International Harvester Refrigerators and Freezers! Selling the complete, well-balanced line! Winning new customers for the products of International Harvester, one of the great names in American industry, with more than a century of quality manufacturing background!

No wonder Harvester Refrigeration dealers are cheering this great new advertising campaign . . . and the powerful tie-in promotional material they are receiving this Spring. Because it will make IH Freezers and Refrigerators sell faster than ever. And that means bigger profits for IH dealers.

INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago 1, Illinois

Tune in James Melton and "Harvest of Stars," now on NBC, Sunday afternoons

IN THESE GREAT MAGAZINES..

INTERNATIONAL HARVESTER
Refrigerators and Freezers

SHANK REFRIGERATION PRODUCTS
COPPER DEHYDRATORS
with Brass Forged Ends

The low cost of Shank Dehydrators makes it more economical to replace used dehydrators than to refill.

2" O.D.—Copper Tubing with ¼" and ⅜" Flare Fittings. Ends—Brass Forgings with large hexagon area for Easy Service Mounting. Copper Tube sweat fitted to forging. Brass screens and felt filter.

1" O.D.—Spun End Copper Tube—Brass End Fittings properly proportioned and silver soldered. Brass screens and felt filter.

If Your Jobber Doesn't Stock—Write Us.

CYRUS SHANK COMPANY
631 W. JACKSON BLVD. CHICAGO 6, ILL.

Knoxville Appliance Volume In January Far Ahead of December

KNOXVILLE, Tenn.—Major appliance sales by local dealers during January zoomed far ahead of December totals but at the same time fell from 35 to 50% below the level of business last year, reports by the Knoxville Utilities Board indicate.

Sales of home freezers, refrigerators, and washing machines were nearly double those of December. Ranges and water heaters reported less spectacular gains. Dishwasher, waste disposal unit, and ironer sales, however, were somewhat below December.

As compared with January, 1948, home freezer, range, and water heater sales were off 50%. Refrigerator and washing machine sales were down about 40%. Ironer sales were about 35% behind last year.

Only 24 dealers reported sales this year as compared with 38 last year. January sales by unit and total value were as follows:

	No. of Units	Value
Home Freezers	7	$ 2,330
Refrigerators	167	45,182
Ranges	143	35,547
Water Heaters	39	5,705
Dishwashers	2	900
Waste Disposal Units	1	125
Washing Machines	273	38,350
Ironers	24	4,010

Hill-York Gets $100,000 Order

MIAMI BEACH, Fla.—Contracts have been signed with the Hill-York Co. for installation of a $100,000 central-plant air conditioning system in the Hyde Park hotel here.

Ontario Dealers Schedule Sixth Annual Meeting, Apr. 11 & 12

TORONTO, Ont., Can.—Sixth annual convention of the Ontario Association of Radio and Appliance Dealers will be staged in the Royal York hotel here on April 11 and 12, the association has recently announced.

David Dunton, chairman of the board of governors of the Canadian Broadcasting Corp. is scheduled to speak on the "Future of Television and FM in Canada."

Radio Free with Refrigerator Spurs Sattler's Sales

BUFFALO — Sattler's stimulated its refrigerator business by offering an Admiral table model radio free with each purchase of an Admiral refrigerator at $269.95.

A store spokesman said the promotion, launched with a large newspaper advertisement, resulted in several sales the first day and a sharp increase in traffic in the appliance department.

G-E Names E. E. Folsom, Jr. Asst. Mgr. of Trenton Wks.

TRENTON, N. J.—Elwood E. Folsom, Jr., formerly quality control engineer for the General Electric appliance and merchandise department, has been appointed assistant manager of the Trenton Works of the company's home laundry equipment division, it has been announced recently by Harry Kilbey, works manager.

Dealership Starts Its Sales Training, Which Includes 2 Days on Service Truck, When Man Is First Selected

Tried and Proven Methods Produce $1,500,000 Volume

By C. Dale Mericle

FORT WORTH, Tex. — Intensive training and regular product demonstrations for salesmen, incentive rewards for selling, heavy newspaper advertising, and complete service facilities were combined by Vergal Bourland here to build up a $1,500,000 sales record in appliances last year—the third year the dealership had been in business.

Alert and quick-thinking, Bourland depends on all the tried and proven methods of specialty selling and has endeavored to train his large force of salesmen in this fine art.

There's plenty of parking space directly in front of this ultra-modern dealership.

With newspaper advertisements appearing every day, busy Vergal Bourland and Colleen Murphy, advertising manager, devote a lot of thought and time to preparing copy and schedules.

THREE CREWS FOR TWO STORES

Operating two stores, the firm maintains three crews of salesmen, one in the branch on North St. here, the other two working out of the main store on W. Seventh St.

The main store is a large place of ultra-modern design featuring a broad expanse of display windows and a sizeable parking lot directly in front of the store. This makes shopping extremely convenient. Prospects can "window-shop" right from their car at this store if they so desire.

While this is important, one of the major things in the firm's operation is the carefully trained sales force. The training, in a sense, might almost be said to begin with the selection of would-be salesmen, emphasize Bourland and Charles Taber, veteran specialty salesman who now heads up sales training as well as serving as personnel manager for the firm.

SALES APPLICANTS GET APTITUDE TEST

"We have each potential salesman take an aptitude test, which is very carefully graded, even though we aren't absolutely certain just how dependable this test is in determining sales ability," explain Bourland and Taber.

"Next we study very closely the character references and data on past experience before we even talk seriously with the man about his becoming a salesman for us.

"When we've decided that the man has the proper background we put him through our training school where he gets intensive training for a week from Taber. This week includes two days spent on a service and installation truck, not, of course, to learn how to be a serviceman but to become acquainted with some of the problems involved at that end of the business which will help in making sales," Bourland declared.

"After the first week of training, the new salesman is turned over to one of the three sales supervisors and the training continues," Taber said.

Every morning from 8 to 9 o'clock there are product demonstrations which the new salesman as well as the veterans attend. And then on Saturday morning from 9 to 10 the sales supervisors talk with their men individually, checking on sales quotas and the like.

"We know that we give good sales training," Bourland asserts, but he says that keeping the newer men has become a problem in the past few months, ever since October, as a matter of fact, when appliances became plentiful and selling a little more difficult.

"We've been losing about five men a month since then, almost all of them new men who don't have the persistence to keep going in the face of increasing sales resistance," stated Bourland. "The older, more experienced men stay right along with us, however."

One of the things that Bourland cites as proof of the firm's good training is the fact that he's had two home economists and demonstrators who've both been hired away by branch offices of appliance manufacturers.

Taber, the man in charge of training salesmen, should certainly be well qualified for this job if his past performance as a salesman is the criterion. A veteran specialty man, Taber last year won many prizes in sales contests until he was promoted last December.

LESS EMPHASIS ON CONTESTS

The list of his prizes last year includes a Ford sedan, a Carrier room air conditioner, five suits of clothes, a weekend trip to a summer resort, a couple of hats, five shirts, and six ties. Admittedly, Taber copped most of the prizes offered by Bourland last year, but there were some other winners.

This year Bourland is placing less emphasis on contests because he has increased the commissions paid to salesmen. This arrangement provides for a sliding scale of commissions that "definitely gives salesmen great-

(Concluded on next page)

Taking the Sales Temperature Reading

Incentives for salesmen in the form of bonuses, prize contests, and other awards are a vital ingredient of the success formula for high volume sales employed by Vergal Bourland's in Fort Worth. Here Bill Blackmon, a salesman, checks his sales "temperature" with Norvell B. Warren, one of the firm's three sales managers. The big blackboard is in a large room used exclusively by the sales force for daily sales meetings and product demonstrations.

Acme
FREON OIL SEPARATORS
Double filter for double efficiency. Maximum separation of oil from refrigerant vapor. Six models meet all requirements for installations from ¼ HP up to 10 HP. All installations can be serviced at moderate cost. Underwriters laboratories approval seal on each model.
ACME PRODUCTS
ACME INDUSTRIES, INC.
Jackson, Michigan
Representatives in all principal cities

ANSUL OIL
THE ALL-TEMPERATURE REFRIGERATION OIL
Recommended for air conditioning and refrigeration systems using standard refrigerants.
ANSUL OIL is an ALL-Temperature Refrigeration Oil which conforms to the rigid wax-free specifications established by Research. It will not separate wax when mixed with a refrigerant (under specified conditions), and subjected to temperatures as low as SEVENTY DEGREES BELOW ZERO (Fahrenheit).
ANSUL OIL has been machine tested for lubrication and wax-free characteristics in both high and low temperature installations. It is absolutely uniform . . . maintains high stability and has a low oxidation rate. It has proved suitable for ALL refrigerating systems using any of the standard refrigerants.
Ansul Research was first to recognize the problems resulting from low-temperature wax separation in oil-refrigerant mixtures. It realized the critical need for an oil which would not only lubricate and protect moving parts but would also eliminate the persistent troubles which were traced to wax-separation from oil-refrigerant mixtures.
ANSUL OIL
THE ALL-TEMPERATURE REFRIGERATION OIL
ANSUL TESTED FOR ✓ LOW MOISTURE ✓ LOW WAX ✓ HIGH STABILITY
ANSUL OIL — the all-Temperature Refrigeration Oil — is sold by leading refrigeration wholesalers everywhere. Get it where you buy your ANSUL sulfur dioxide and ANSUL methyl chloride.
ANSUL CHEMICAL COMPANY
REFRIGERATION DIVISION, MARINETTE, WISCONSIN
ANSUL SULFUR DIOXIDE · ANSUL METHYL CHLORIDE · ANSUL OILS · KINETIC'S "FREONS"

Out-features them all! Sheer beauty, with larger capacity and better construction, at lower prices.
the new Amana freezer-refrigerator
Separate doors and temperature controls for separate Freezer and Refrigerator compartments!
DEALERS! DISTRIBUTORS! WRITE!
REFRIGERATION DIVISION
Amana Society
AMANA 14, IOWA

Wall WIRE PRODUCTS COMPANY
Manufactures of...
REFRIGERATOR SHELVES · STAMPINGS
FORMED AND WELDED PRODUCTS
Tops in Baseball - the CLEVELAND INDIANS and in Refrigerator Shelf Manufacture - WALL.
WALL WIRE PRODUCTS COMPANY Plymouth, Michigan

Sliding Scale of Commissions, Using Daily Newspaper Advertising Aid Sales

(Concluded from Preceding Page)

er incentive," Bourland says.

New salesmen are started out with a small drawing account, and at the end of 60 days this drawing account is increased. Salesmen's commissions are figured every month and are paid less the drawing accounts.

Although sales contests are being de-emphasized slightly now, they haven't been dropped by any means. And Taber has been using a little punchboard scheme to encourage sales of merchandise being offered as "specials."

PUNCHBOARD PAYS OFF IN SILVER

"When a salesman reports the sale of a 'special' he is permitted to take a punch on a punchboard which I keep," Taber explains. "Each punch is worth from $1 to $5, and the men are paid immediately in silver dollars. This is quite an incentive."

The payment takes place during the morning sales meetings, which break up at 9. The sales crew from the North St. branch meets at the main store with the two other crews for these meetings, after which men are selected by the three sales supervisors for floor duty so that every fourth day a salesman gets a chance to work on the floor. Another salesman is picked to answer the telephone in the large salesmen's room directly behind the very spacious display floor.

DOORBELL PUSHERS START OUT

After the morning meeting is over the salesmen scheduled for outside work start out on cold canvassing or following up their leads. Generally, said Taber, they are advised to make all appointments for the afternoon so their mornings can be devoted to pushing doorbells.

Salesmen also get together once a month in the evening, usually at the beginning of the month, for a "kick-off" dinner during which the sales program and contest for the month is outlined to them.

Speaking of "kick-off," Bourland every fall during the football season divides the salesmen up into two "teams" and figures sales every week in football scoring terms. The losing team of salesmen has to stay in the store on Saturday afternoons while members of the winning team are Bourland's guests in his box at the stadium of Texas Christian university.

This contest arouses a lot of enthusiasm, according to Taber.

Such contests, the morning product demonstrations, and the sales training are closely tied in with the firm's advertising and promotion schedule for the coming month.

And what products will receive emphasis during the month is largely dependent on the inventory status. If the firm is overloaded on one product, that item usually is pushed more than the others.

Bourland uses a great deal of newspaper advertising, and usually runs an advertisement every day, according to Miss Colleen Murphy, advertising manager.

Although some direct-mail advertising is also employed, radio advertising was dropped recently.

"It didn't bring any direct results for us," she said.

Besides the emphasis on sales training, contests, and advertising, Bourland does not neglect still another important phase of appliance merchandising—the service department.

A crew of servicemen generally numbering 14 or so is maintained to handle the servicing "on any unit we sell," Taber says.

And at the main store there are four separate repair shops for refrigerators, washers, small appliances, and radios. In addition, a considerable supply of parts is kept on hand to speed repair operations.

Included in the shop setup at the main store is a paint spray booth. This plays an important role in the reconditioning of trade-ins. After being reoperated and refinished, trade-in merchandise goes on display in the large mezzanine of the North St. branch. Occasionally, however, items are sold from the main store before there's been time to ship them over to North St.

These reconditioned appliances are often featured in special sales, which are generally offered about once a month, and are backed up by heavy advertising.

As for new equipment, Bourland handles Kelvinator, Hotpoint, Deep-freeze, Bendix, ABC, Magic Chef, RCA, Stromberg-Carlson, Eureka, Morton and Hotpoint kitchens, small appliances, and phonograph records.

One of Two Kitchen Displays

There are two such kitchen displays at Bourland's main store in Fort Worth, here being given the once-over by Elijio Lopez, Spanish-speaking salesman.

Literature Rack

A veteran salesman, Charles Taber now directs sales training for Bourland. He devised this rack for sales literature, so leaflets could be quickly found for customers.

1 Stop Service

saves TIME and MONEY for AIR CONDITIONING and REFRIGERATION CONTRACTORS

This famous Hajoca one-stop service, is something you must experience to know. With supplies and equipment for the installation and maintenance of refrigeration and air conditioning plants at strategically located Branches on the Atlantic Seaboard, Hajoca is in an unusual position to render prompt deliveries to keep your jobs rolling fast.

A complete line of famous name parts (White-Rogers Controls, Gilmer Belts, Larkin Coils and many others) plus pipes, valves and fittings are maintained to make your Hajoca Branch the ideal *one-stop* service center.

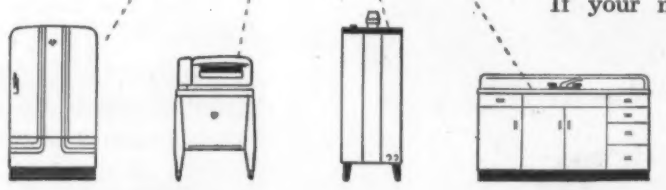
HAJOCA CORPORATION

Pennsylvania: Philadelphia (Erie Ave. Branch), Lansdowne, Reading
Georgia: Columbus
Florida: Jacksonville
New Jersey: Camden
Tennessee: Chattanooga

Sell all types of difficult prospects . . .

DU PONT Dulux ENAMEL

It identifies America's leading home appliance finish!



USE THE DU PONT SEAL TO CLOSE THE DEAL

Here's a real "toughie"! That's why it's a good idea to call on a valuable ally—the Du Pont "Dulux" seal—and let it speak for itself.

Quality-wise customers everywhere recognize the name "Du Pont" . . . as assurance of a finish that gives *years* of washable, mar-resistant service and sparkling good looks. All you need add is that "Dulux" is rigidly pre-tested.

If your manufacturer supplies you "Dulux"-finished appliances *without* the seal, ask him to include it in the future. It's the quick, easy way to establish quality . . . helps make customers out of difficult prospects.

Here's selling made easier! FREE new informative booklet gives you profitable "selling points" for appliances finished with DULUX. Send coupon today for your copy.

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DULUX REG. U.S. PAT. OFF.

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Finishes Division, Dept. A.C.-93
Wilmington 98, Delaware

Please send, free of charge, your new illustrated booklet, "Inside Information on the Outside."

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Firm_____

Address_____

City_____ State_____

They'll Do It Every Time . . . . By Jimmy Hatlo

SHAKE, BOSS! IT'S A BOY! WE NAMED HIM J. PLUVIUS AFTER YOU! AND WE WANT YOU TO BE HIS GODFATHER, TOO! WE ONLY HOPE HE GROWS UP TO BE THE MAN THAT YOU ARE!
THAT'S A FINE HANDICAP TO WISH ON A POOR LITTLE KID... BUT IT'LL TAKE MORE THAN THAT TO HOLD MONGOOSE'S JOB...
IF HE GROWS UP LIKE BIGDOME, THAT'LL BE TWO SO-AND-SOS TOO MANY...
WELL, WELL, THAT'S GREAT, MONGOOSE... GREAT! YES, SIREE! DEE-LIGHTED!
I DON'T KNOW WHICH COULD BE WORSE FOR THE KID--TAKING AFTER BOSS-O OR MONGOOSE...
FIRST PROVE THAT BIGDOME EVER DID GROW UP!
JIMMY HATLO
EL NAUSEAS
J.P. BIGDOME
EVERYBODY'S HAPPY—ESPECIALLY THE GUYS WHO DON'T SMOKE CIGARS
THANX AND A TIP O' THE HAT, AND A CIGAR, TO "POP'S PALS", NEW YORK, N.Y.
1-31
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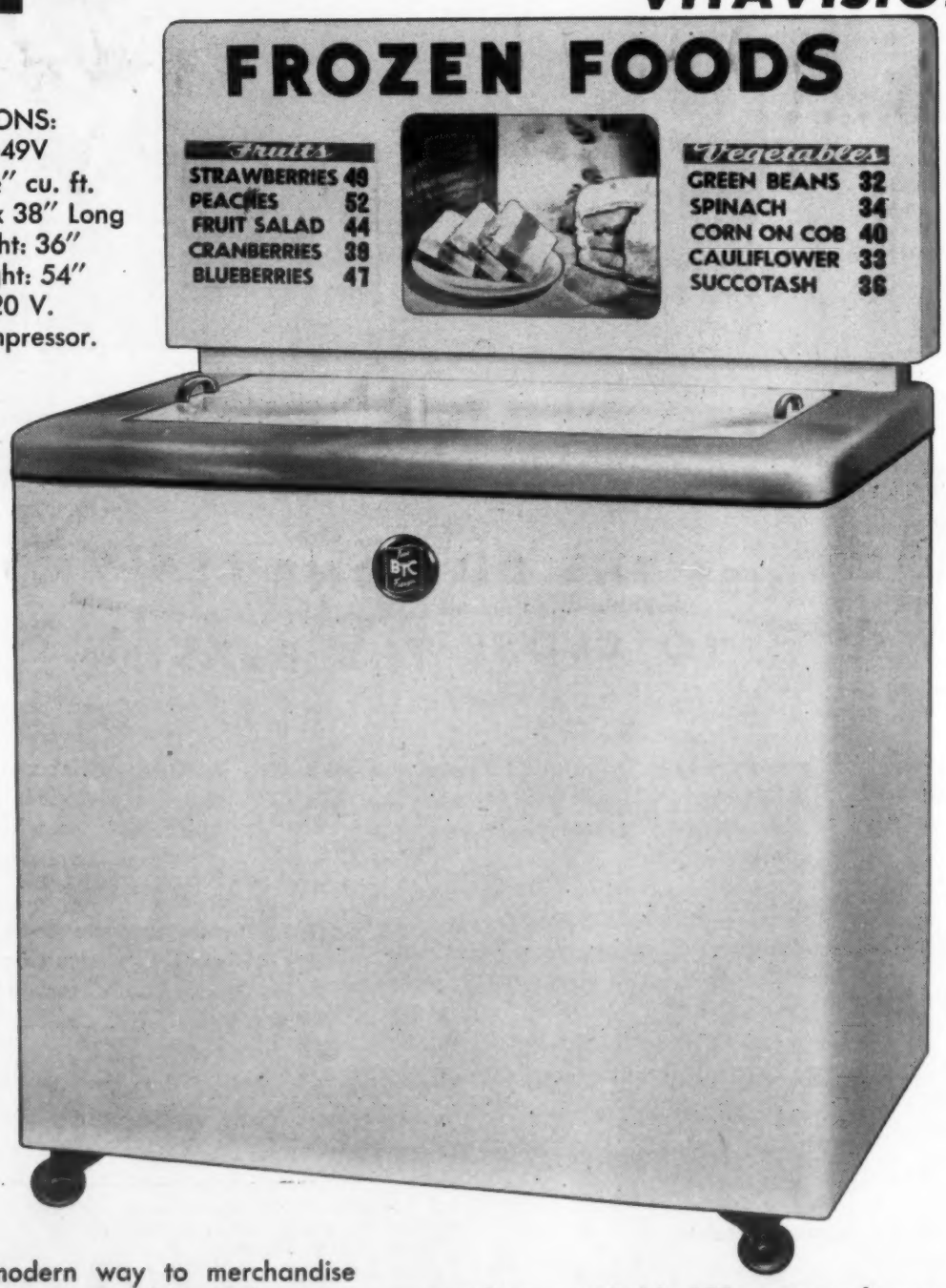
Do You Have 'One Foot In the Door'?

HOW TO MAKE CUSTOMERS STOP AND SHOP

Use **BTC** Portable Display Case *with* **VITAVISION**

SPECIFICATIONS:
Model DC 6-49V
Capacity, 5½" cu. ft.
23½" Wide x 38" Long
Cabinet Height: 36"
Over-all Height: 54"
Motor 110-120 V.
Hermetic Compressor.



Here's the modern way to merchandise frozen foods — a portable display case you can move where you want with a full-color 3-dimensional VITAVISION food picture to turn buying impulses into sales.
The new BTC Portable Display Case, Model DC 6-49V, is small enough to fit practically anywhere, yet holds 190 average frozen food packages; low-level superstructure is fluorescent lighted with VITAVISION color; two price panels; stainless steel trim; Santocel insulation, vapor-sealed and smooth rolling casters.

Write for details on profitable BTC Distributor Franchise.

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AIR CONDITIONING AND REFRIGERATION News

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Published Every Monday by BUSINESS NEWS PUBLISHING CO.
450 W. Fort St., Detroit 26, Mich. Telephone Woodward 2-0924.

Subscription Rates: U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: $5.00 per year; 2 years $8.00. All other foreign countries: $7.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Please send remittance with order.

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VOLUME 56, NO. 12, SERIAL NO. 1,044, MARCH 21, 1949

Making It Easy To Buy Through Showmanship And Eye Appeal

"SKIN-DEEP" beauty may be deprecated by a minority of old fuddy-duddies.

But nobody can overlook the fact that quick, first impressions about a product often mean the difference between hurried rushing on, and a profitable pause for a second look-see on the part of a sales prospect—when he or she is walking past a block of contiguous store-fronts.

Your store's external attractiveness, then, can be most important to your success—particularly if you are starting out anew or afresh to *sell again.*

Of course, if your capital is strictly limited, it's best to put your money into stock, rather than into fixtures.

But sometimes fixtures can help sell stock (or "to be delivered upon application" stock) when one chooses to gamble on a more rapid turnover.

Much depends upon the sense of showmanship possessed by the man-behind-the-fixtures, or the man-behind-the-stock.

Primarily, you should see to it that what you have for sale is readily seen, and easily touchable.

Apply the chain-store help-yourself theory to your specialty selling business.

Let customers sell themselves.

Both the outside and inside of your showroom should be clean and bright, colorful and attractive. They should employ all the devices of eye-catching and interest-holding psychology you can muster out of your own experience or can glean from books.

For it is true that *gaining interest* is the first step toward *making a sale.*

Next, you should see to it that interested prospects experience no trouble in finding their way into your showroom, nor in examining for themselves the specialty products you wish to sell them. Make your entrance attractive. Keep your aisles clean.

Ease every path for prospects.

They're wary enough, normally.

Don't discourage them.

Convenience and showmanship are the criteria by which you should judge both your exterior and interior displays.

Cleanliness and readiness-to-operate are important, too.

Be sure the items you have on display will *work,* if you're called upon to demonstrate them.

Light and motion, in displays, are like life and action in human relations.

Static, colorless displays seldom induce buying action. Dramatically displayed originality, in this connection, can be worth far more than it costs in terms of eventual sales.

Cast off the shibboleths of beaten-track "display" notions. Try new store-scopes! Be imaginative!

The best dealers are often the most unconventional, and the most original.

Displaying your product to best advantage calls for Showmanship. Be a Barnum, a Ziegfeld, a Roosevelt! Take chances! Be unorthodox! Be different!

Originality and daring will be profitable, you'll find. Let yourself go! Anything for attention! Everything for an impression!

People see better than they hear. And the creative use of eye-appeal can step up your sales of appliances and refrigeration and air conditioning equipment.

HOW WILL REG. W REVISIONS AFFECT BUSINESS?

1. *Major Appliances Get Sharp Cut In Payments*

WASHINGTON, D. C.—Sharpest reductions in monthly payments under the revised Federal Reserve Board credit regulations which became effective March 7 occur in purchases of electrical appliances.

For example: to buy a $500 television set under the new regulations will require monthly payments of $22.36 against the $28.66 under former rules.

Accounting for most of the difference is the six months longer period over which payments may be made. The down payment is smaller—15% against 20% under the former regulations.

Effective March 7 the time permitted for payment of instalment balances under Regulation W was increased to 21 months for all items under control. Items other than automobiles can be bought for a 15% down payment.

The table below shows how the new and former regulations work in the purchase of automobiles in three price ranges, and in the purchase of two major appliances:

* * *

	New Down Payment	Old Down Payment	Monthly Payments Under New Regulations	Monthly Payments Under Old Regulations
$1,900 Automobile	$ 633.33	$ 633.33	$ 73.51	$ 84.60
2,500 Automobile	833.33	833.33	95.61	110.03
3,200 Automobile	1,066.66	1,066.66	121.71	140.06
500 Television Set ..	75.00	100.00	22.36	28.66
300 Refrigerator ...	45.00	60.00	13.42	17.20

Monthly payments include interest charges and insurance.

2. *Reaction to Easing of Credit Terms Is Mixed*

DETROIT—Opinion in the field on the effect—and value—of the relaxed instalment credit regulation was mixed. Some of the reaction, in view of the clamor for relaxing the Regulation W provisions, was quite strange.

A check of top-flight department and furniture stores in New York City revealed that while payments will go back to 15%, the maximum period for instalments will be 18 months (at least that seems to be the announced intention).

However, there seems to be the feeling that consumers will demand the maximum terms of 21 months, and stores will be forced to go to it. Speaking along these lines, Manfred I. Behrens, Jr., vice president and general manager, Ludwig Baumann, said:

"It's the best possible proof that we don't need Regulation W at all. During the period when consumer credit was unregulated, the great majority of important home furnishings merchants kept the maximum payment period to 18 months.

"The competitive effect of the new ruling will be to force stores to 21 months for payment whether they want to or not. The government specifies 21 months as the maximum period and consumers will demand it."

There were those who felt that the change had not gone far enough. I. Frank Brownson, manager of major appliances for Westinghouse, was quoted as saying:

"It seems to me that 10% down and 24 months to pay would be a more logical step for the liberalization."

Clifford Simpson, managing director, National Appliance and Radio Dealers Association, declared that a survey made by the association indicated that most retailers favored retention of some type of credit restrictions to thwart the "dollar down, dollar when you catch 'em" type of operator.

On the reduction to 15% from 20% on the down payment required, Jack Grimes, San Francisco dealer, stated:

"I'd rather see the down payment at 20%—even if we did less business, we'd have less loss. The man who has more than 20% down will usually pay up."

A big Dallas furniture and appliance retailer expects repossessions to go up sharply after about six months of easier credit terms "because easier terms are going to bring price cutting."

Duke Doyle, another Dallas dealer, plans to go easy on promoting the new terms.

"I'll let customers know that credit requirements have been eased," he said, "but that's as far as I'm going for a while."

Popularity of Selling Course Prompts Institute To Hold New One March 31

WASHINGTON, D. C.—The Electrical Institute of Washington has announced that it will repeat its "successful selling" course with new sessions to get under way on March 31.

The original program, which came to a close recently, was oversubscribed and aroused so much interest that the institute decided to repeat it. The course consists of five sessions that will be held on successive Thursday evenings in the institute's Electric Playhouse in the Pepco building at 10th and E Sts. N.W. here.

Sales training films and talks by sales authorities with from 13 to 35 years experience in the field comprise the program. Whitney D. Watkins, sales training director of the institute, has charge of the series.

Enrollment is limited to 100 persons due to the small capacity of the auditorium. A registration fee of $2 per person is charged which is used to make up cash prizes that are awarded to successful participants.

The institute absorbs the actual cost of the program, according to Watkins.

Freezer Distributor Places 50-Carload Order

An order for 50 carloads of Amana freezers—believed to be the biggest such order on record—was recently placed by Valmart Distributors, Inc. Valmart President Fred Rohrlich (center) is congratulated by Ed Hinchcliff (left), sales manager for Amana's Refrigeration Div., and W. F. Kern, Amana's Eastern division sales head.

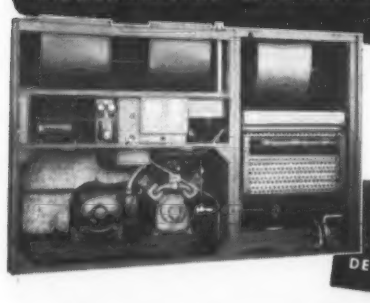
Gibson Pays 15-Cent Dividend

GREENVILLE, Mich.—A quarterly dividend of 15 cents payable on March 29 to stock of record March 16 has been announced by the Gibson Refrigerator Co. here.

Westinghouse Appoints Hansen L. A. District Appliance Mgr.

LOS ANGELES—Appointment of Harold M. Hansen as district appliance manager of the Westinghouse Electric Supply Co. here has been announced by L. G. Berger, district manager. Hansen was formerly multiple housing manager for the firm.

NEW THINKING CREATES
NEW VALUE, BETTER PROFITS
NEW
REFRIGERATED KOOLER-AIRE



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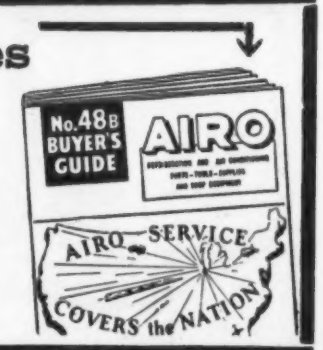
Please Write on Your Letterhead



AIRO SUPPLY CO.
2732 N. ASHLAND AVENUE • CHICAGO 14, ILL.

Inland's "Magic Touch"

NATIONAL ADVERTISING SELLS IT!

Thousands of your refrigerator prospects and users will see this picture in Inland's "Magic Touch" advertising in the Saturday Evening Post and Good Housekeeping during the best selling season. It tells how the "Magic Touch" Ice Cube Tray works. It *sells* the complete ice cube convenience possible *only* with Inland's "Magic Touch."

Demonstrating this Inland Ice Cube Tray to refrigerator prospects makes sales easier. So be sure that all new refrigerators you stock and display offer the "Magic Touch." Insist that they come to you completely equipped with Inland "Magic Touch" Ice Cube Trays.

Easy Replacement Sales for Quick Profits

Sell the "Magic Touch" Tray to refrigerator users who are now getting along with battered, outmoded, inconvenient trays. The marvelous convenience of the "Magic Touch" is so obvious that replacement sales are amazingly easy. Get these immediate profits—this season, this month, now!

New refrigerators fully equipped with Inland "Magic Touch" Ice Trays give your customers complete ice convenience

"Magic Touch" Ice Trays by INLAND MANUFACTURING

INLAND MANUFACTURING DIVISION
General Motors Corporation, Dayton, Ohio

Choosing Proper Coils

Whether Job Calls for Prime Surface or Finned Coils Depends on Temperature Difference, Quantity of Air, Defrost Period

PHILADELPHIA—Selection of the correct type and size of commercial refrigeration coil is a matter of fitting the proper piece of equipment to the job, in the light of known facts about the operating characteristics of the equipment, and past experience with the type of application.

Fundamentals of such selection procedure were described in a paper prepared by Albert Hanson of Drayer-Hanson, Los Angeles, and presented before the Philadelphia section of the American Society of Refrigerating Engineers by Ted McLaughlin of Rasco, Inc., Philadelphia.

The manufacturer when designing his coil, or the contractor, when making his selection, can design or select to meet certain requirements. In designing or selecting any piece of apparatus the first consideration is "what am I trying to do."

In other words, define your problem. Any refrigeration problem involving room cooling is air conditioning, only at lower temperatures. Therefore, think of the problem as you would an air conditioning problem.

Room conditions in relation to humidity and temperature can be pretty well controlled through movement of air and refrigerant temperature. We can also control frost conditions particularly when working around 36 to 40° temperatures.

Coils Are Rated According To Temperature Difference

Practically all coil manufacturers rate their coils on the basis of the apparent temperature difference between room air and refrigerant. Actually, they have designed on the basis of the logarithmic mean temperature difference.

There are tables that give the M.T.D. when the larger and smaller temperature differences are known. Armed with this data it is easily possible to calculate for the surface requirements for any given problem.

It stands to reason that the air leaving the coil must be warmer than the coldest refrigerant. And it must be at least 2° F. warmer to have an exchange of heat. This is fundamental, yet I have seen coils designed to work at a 10° A.T.D. when the air quantity was so low it had to be cooled 12° and even 15° to do the work the coil was expected to do. It is obvious that you must have sufficient air so that its leaving temperature is higher than the refrigerant temperature.

More Air Increases Load

How much higher? Again, "what am I trying to do." If it is high humidities you want, the more air the less change in temperature, the better off you are. Also, the more air the higher the motor horsepower and greater internal load.

But, the greater the air movement, the quicker the pull down, the better the final product; particularly, with reference to freezing. However, in handling greater air quantities more thought and care must be given to air distribution which many of us are too reluctant to do.

With reference to the matter of humidity, Hanson pointed out that there are two sources of moisture; namely, the product and infiltration.

"We spend a lot of money to prevent infiltration, therefore, it must come from the product; thus, the less moisture removed in cooling, the less to be added through product shrinkage. I know of meat storage rooms having only 1% shrinkage in 30 days because of proper air movement and temperature difference. Greater air movement permits higher humidity and prevents slime on the product, particularly meat.

"We like to design our product so that the air is cooled one half the difference between entering air and refrigerant. We try to religiously keep that basic spread. It has other advantages.

"For example, when trying to hold 36-38° room temperature you practically run a frost free coil all the time. At 38° the air leaving is above 32°, therefore, no frost or very little. When the temperature drops below 38° the frost build up is light and the defrost period is quick. This permits longer cycles on pull down, a particular advantage on pre-cooling jobs."

So much for fundamental design. What are the types of surface available? They break down into two basic classes:

1. All prime.
2. Fin and tube.

The fin and tube breaks down into two general classifications; namely:

Close fin spacing.
Wide fin spacing.

More regarding fin spacing later. Where do we use prime surface? Wherever the customer has lots of money or you are afraid to use fin. Seriously, there are few uses for prime surface. Use prime surface coils when your problem fits these conditions:

1. Heavy continuous loads with no opportunity for a defrost period until the end of a freeze or pre-cooling cycle. Temperature should be below 36°.

There are some who believe that only prime surface can be used for freezing and low temperature work. This fallacy was disproven 15 years ago but it takes time to change old timers.

2. Typical application would be a meat chill room where 32 to 34° is required and an exceptionally heavy moisture load. A continuous spray unit is preferred for such an application.

"I have seen our standard Spasaver coils successfully used for meat chill rooms," Hanson stated. "In such cases the operator was satisfied with 36 to 38° room temperatures and the coils were selected on the basis of an 8° A.T.D.

Referring back to the original basic design data discussion, we note the air would be leaving above the frost point so we would operate a frost free coil even with a heavy continuous product load.

Type Coil Used Where Load Is Heavy, Continuous

A variation of the dry prime surface coil is the continuous spray coil. Primary use is to maintain a frost free coil where temperatures are close to freezing or below freezing. I would only use such a coil where the load was heavy and continuous over a long period of time.

"The trend is away from using continuous spray for ordinary freezer storage," Hanson states. "While we are manufacturers of finned surface and want to sell such surface, we don't want to do it at the expense of an unsatisfactory job and a dissatisfied customer. Let us take a specific application example. A pre-cooling plant. The basic load calculations are not of our concern but let us assume the following:

Product load	96,000 B.t.u./hr.
Room load including occupancy	42,000 B.t.u./hr.
Both loads have been corrected for 18-hour compressor operation	
Desired room temperature	40°

"Our first clue to establishing the type of equipment is the room temperature. It indicates that we can select a coil that will operate frost free, therefore, use close fin spacing and work at a 10° T.D. at the last of your load. Now, supposing the desired final room temperature was 32 to 33°. No matter what we did our coil would not operate frost free as the air leaving would be below freezing. We must select one of the following type coils.

"1. Prime surface with or without continuous spray.

"2. Finned surface with 3 or 4 fins per inch and equipped with some means of defrosting.

Where to Use Finned Surface

"Let us analyze the problem further. Is it a high continuous moisture load? If it is, use prime surface or continuous spray. If it is packaged or does not have a high continuous moisture load, or if it is an intermittent load, use the finned surface.

"The type of problem as well as temperatures involved determine our final solution. With the basic fundamentals in mind you can solve any high temperature problem similarly.

"Let us look at the 28 to 32° temperature range. Probably the most difficult temperature range to cover. High temperature coils because of their lack of defrosting facilities are unsuitable. Standard low temperature coils, while satisfactory, are either expensive initially or costly to install and at these temperatures require more attention.

"Drayer-Hanson has developed a conversion kit for our Spasaver coil that converts it into a low temperature coil for such applications. It has been field tested on the West Coast for three years and will soon be released for general use.

"With this kit, any Spasaver type coil can be converted to automatic defrost for any low temperature range; particularly, the 28 to 32° range now so expensive to install.

"Finned coils are perfectly suitable for low temperature work with the possibility of one exception and that being loose pack freezing. However, time and again I see finned coils misapplied, operated at too wide a temperature difference.

"Do not select a low temperature finned coil to operate at a 20° T.D. Sure, you reduce the internal fan load maybe 600 B.t.u. by doing so but you penalize your compressor so that you are in the next larger size with a much larger motor.

"Finned coils for low temperature work, selected at a 10° T.D., will rarely ever give trouble with icing and capacity. Remember the greater the T.D. the more rapid the frost build up. The greater the frost build up the less the coil capacity.

"It is a vicious circle with the contractor in the middle. The next time you buy a coil, look at the small extra in price for the next larger coil; then think of the time spent in trying to make a coil selected at 20° T.D. work.

"Best operation of a low temperature coil fed with a thermo valve is obtained by using two heat exchangers. The first exchanger is used to provide superheat to operate the expansion valve, the second to superheat the gas to protect the machine. Although the policy today is to furnish one heat exchanger, the time is not too far distant that two will be used.

"Finned surface can be used safely for any low temperature application providing a careful analysis of the problem is made. For example, I would use a ¼-in. spacing finned coil for freezing loose pack in a continuous freezer. Use ½-in. fin spacing for this application and defrost during a lunch period. You should get along satisfactorily for a four hour period.

Application of Finned Coils For Blast Freezing

"Many say that finned surface cannot be used for any kind of freezing. This is not so. At the California Consumer's plant in Pasadena, a 450-ton blast freezer has been in operation for three years. The coil bank consists of two sections, each 8 ft. high by 17 ft. long and 40 in. deep. Material used is aluminum and fins are spaced on ¼-in. centers, defrosting two to three times per week. Results have been exceptionally satisfactory.

"Smaller blast freezers with ¼-in. fins have been in use at this same plant since 1938. Large air quantities, close T.D. is the secret of success. Of course, large air quantities mean faster freezing and a better product.

"The location of the low temperature coil has much to do with its successful operation. Do not install one over a doorway or near an opening of any kind. Blow toward an opening. If you don't—warm moist air will hit the coil first depositing its moisture and blocking the surface. Do not operate at too wide a T.D. since it reduces coil efficiency, compressor capacity, and gives an all around lousy job."

In conclusion, Hanson said that the success and failure of any job depends on the application engineer's analysis of the problem. Whenever applying coils to any project know the product you are using, he advised.

Mueller Brass '48 Net Sales Reflect $2 Million Increase

PORT HURON, Mich.—Net sales of $32,167,891 and net income of $2,012,054 for the fiscal year ended Nov. 30, 1948 have been reported by Mueller Brass Co. here. The company earned $3.79 per share.

For fiscal 1947, the firm reported net sales of $30,105,022 and a net income of $2,956,338, or $5.56 per share.

Don Hawk Associates Set Up as Air Conditioning Specialists

NEW YORK CITY—Formation of Don E. Hawk Associates, Inc., specializing in the sales, service, and engineering of air conditioning products, has been announced here. The firm is located at 207 E. 43rd St.

BEAUTY PLUS UTILITY

Larkin refrigeration products are modern proof that engineering beauty can add to functional efficiency. Originator of the Cross Fin Coil, Larkin also produces highest quality in Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—Evaporative Condensers—Air Conditioning Units—Instantaneous Water Coolers—and other superlative equipment for commercial and industrial refrigeration.

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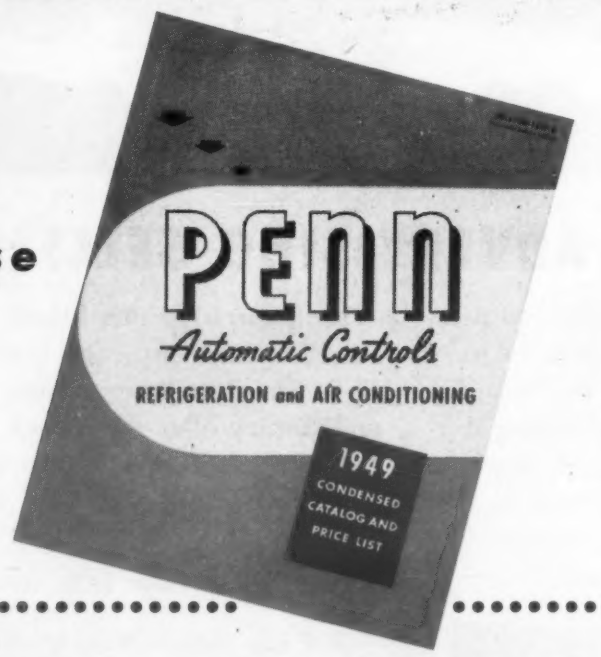

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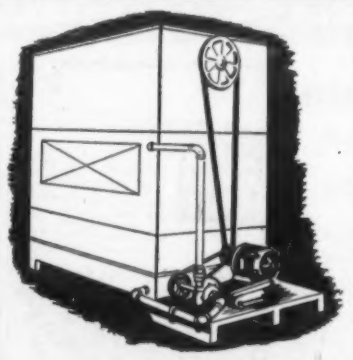

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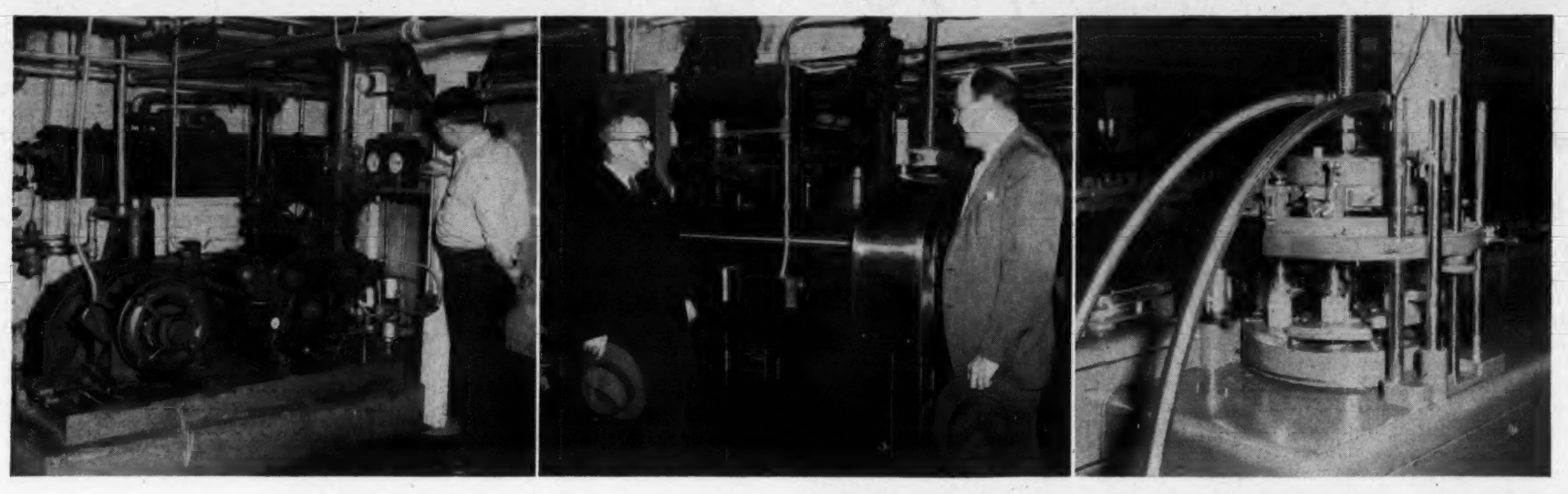


LEFT: W. E. Parker, plant superintendent at Plough, Inc., maker of "Morline" petroleum jelly, takes a reading on the installation which speeds up production and gives a better product with only one third as many people.

CENTER: A. W. Shelby of Shelby-Skipwith checks the "Votator" with Hugh F. Crawford, Plough production manager. The Votator is said to be the heart of the system, which cools the jelly from 140° to 100° in a matter of seconds.

RIGHT: Is the jar-filling machine in the Plough Plant.

• • •

Shelby-Skipwith Partner Recalls Sale Of First Ice Machine to Fish Dealer After Working All Night on Trial Run

By C. Dale Mericle

MEMPHIS, Tenn.—"I'll never forget our first sale.

"Back in 1940 when R. M. Skipwith and myself [A. W. Shelby] got together to form Shelby-Skipwith, Inc. to distribute York, the first prospect I lined up was a fish dealer. We figured we could sell him a Flakice machine.

"He told us he used five barrels of ice a day, and we were sure that the machine would turn out that much, so he agreed to a test run.

"'When do you want the ice?' I asked him.

"'At 5 a.m.'

FIVE BARRELS OF ICE CLINCHES FIRST SALE

"That was a little startling at first, but we went ahead. That evening he dropped off five barrels at our place. I spotted one in front of the machine and started it up about 10 o'clock," Shelby recalls.

"It takes a while to fill up a barrel, and it was pretty lonely just sitting there and watching the rats running around, so I decided to go out for some coffee. After a while I'd come back, set aside the full barrel and put an empty in place, and then go back downtown for more coffee.

"This went on all night, but just before 5 a.m., I had filled the last barrel so we were all set when the fish dealer's truck drove up for them. I went home for a few hours' sleep and then went out to see the prospect. I closed the deal that afternoon."

From this beginning Shelby and Skipwith, who'd both had considerable experience in refrigeration before joining forces in their own firm, have built up a sizeable organization distributing York refrigeration and air conditioning, C. V. Hill fixtures, plus Payne and Delco heating equipment.

FIELD HAS BEEN BROADENED

While their sales today and in recent years have covered a much broader field than ice-making machines, these are still a very important part of their operation.

Just recently they installed five York automatic ice makers and one Flakice unit in the Chisca hotel here to replace a 35-year-old ice-making plant in the basement which was powered by a 60-hp. Murray Corliss steam engine.

Two of the ice makers were located in the grill, and the other three on the first floor beside the service elevators. The Flakice unit is in the kitchen feeding the ice ribbons directly into a large insulated storage box lined with stainless steel.

"This Flakice machine makes a ton of ice a day, which is used for icing cocktails and drinking water for all parties and banquets in the private rooms of the hotel," explains William J. Massey, vice president and general manager of the hotel.

"We had been using 1,500 lbs. of crushed ice a day from the old plant, which is being dismantled now, but we find the new equipment is much more economical. The machines should pay for themselves in 12 to 15 months.

"The most important part is that the ice we now use is definitely more sanitary than any other ice we've ever seen," Massey declared.

Another recent installation made by Shelby-Skipwith—an industrial process refrigeration job—is perhaps representative of what such a contracting firm is called upon to do on occasion.

This system, employing a 25-hp. "Freon-12" condensing unit, went into the Memphis plant of Plough, Inc., pharmaceuticals manufacturer, to provide more accurate control over production of "Moroline," Plough's petroleum jelly.

"The problem involved," explained Hugh F. Crawford, production manager for Plough, "is first getting the air out of the jelly so that it will have an attractive appearance, and, second, cooling it to the proper temperature quickly so it can be poured in jars automatically at high speeds. This means handling 1,500 to 2,000 lbs. an hour and putting it into small jars.

"Heating the jelly up to 175° F. will drive off the air, I learned when we first started working on the problem some time ago. We then observed that if we let the stuff cool for a couple of days down to about 100° F.—a little below its melting point—the jelly was of just the right consistency.

PRODUCTION SPEEDED UP

"This method couldn't be used on a production line, however. What we did was to pour the jelly into the jars as a hot liquid and then run the filled jars through a cooling tunnel. This operation alone required 27 minutes," Crawford said.

"Our new system not only has speeded up production, but it gives a better product with only one third as many people."

Heart of the new setup is a Girdler Corp. "Votator" connected to a 25-hp. York "Freon-12" condensing unit.

Liquid petroleum jelly at a temperature of about 140° F. flows into the Votator under pressure and is spread over a revolving drum which is approximately 1 ft. in diameter and 4 ft. long. The interior of the drum is a full-flooded evaporator. As the drum slowly revolves, the jelly—in a layer a few thousandths of an inch in thickness—is cooled in a matter of seconds from 140° to 100° F. or less.

After being automatically scraped off the drum, the jelly is forced under pressure to the automatic jar-filling machine, where the jars are filled. The jars themselves next go through an automatic capper and then to the automatic machine which loads them into cartons.

AVERAGE 4,000 DOZ. JARS DAILY

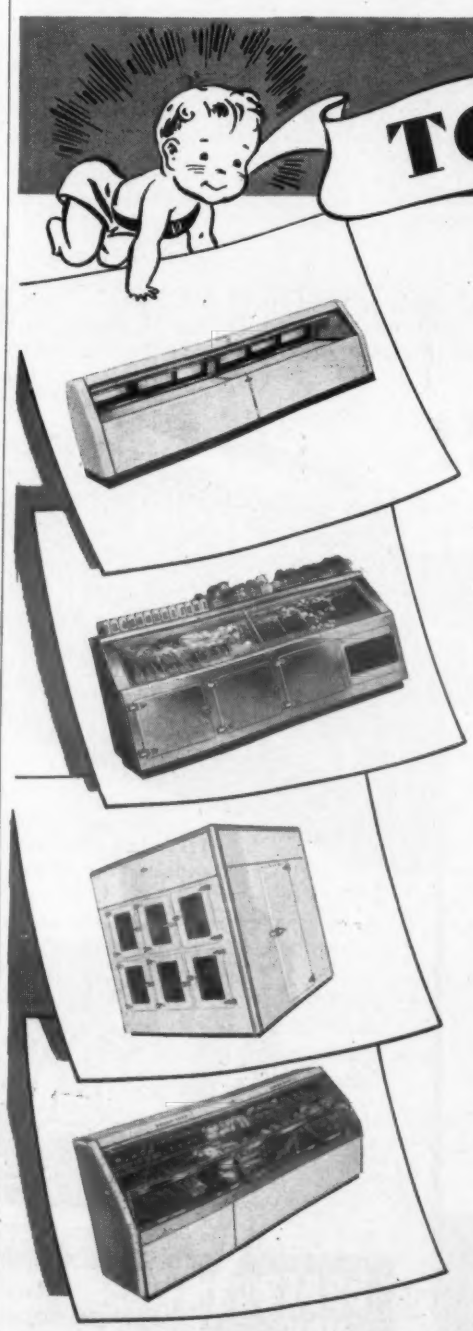
Present production averages 4,000 doz. jars a day, and the best day so far saw 4,300 doz. turned out, according to W. E. Parker, superintendent of this plant.

But getting back to the internal operations of Shelby-Skipwith, Shelby pointed out that the distributorship now has five dealers at the present time covering western Tennessee and parts of Arkansas and Mississippi. In line with the recently announced factory policy of York Corp. to increase dealers, Shelby said his firm expects to line up a total of 25 dealers or so in the near future.

Besides sales, of course, the firm does a considerable service business, including cleaning of air conditioning filters, and operates a replacement parts business of some size, it was indicated.

As part of the service operation, the firm has a number of Certified Maintenance contracts, although Shelby feels that "we should probably have more."

ABOVE: Two of the York automatic ice makers in the grill of the Chisca hotel, Memphis, Tenn. Three more are in the service hall on the first floor beside the service elevator.



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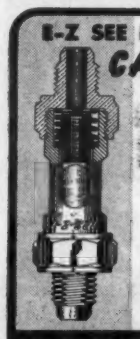
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How 'Lo-Temp Evaporator' System Aids In Frozen Orange Juice Production

While It Requires Large Heat-Exchange Surface, This Method Cuts Costs of Mechanical Compression

CHICAGO—The method of "heat pump" evaporation or distillation, which has brought about sensational improvements in frozen orange juice production, was described by Joseph A. Cross of Monjonnier Bros. Co., at the February meeting of the Chicago section of the American Society of Refrigerating Engineers.

The Mojonnier Co. makes the "Lo-Temp Evaporator" system, utilizing these principles, which has been installed for the orange juice job.

The "heat pump" cycle, said the speaker, includes the following steps.

1.—Vaporizing a liquid by the absorption of heat;

2.—Raising the level of this heat by compressing the vapor;

3.—Reliquifying the vapor by rejection of heat at the high level, and

4.—Returning the liquid to its initial temperature and pressure through an expansion device.

"As refrigeration engineers, you recognize this as a refrigeration cycle," Cross explained. "You 'use' the low pressure, heat absorbing side; and the high pressure, heat rejection side is a necessary evil.

"If you were heating engineers, you would probably think of this cycle as a heating cycle, and 'use' the high pressure or heat rejection side, with the low side as the culprit to be tolerated.

Distillation Uses Both High, Low Sides

"If your primary interest happened to be evaporation or distillation, then both the high side and the low side of the compression cycle become equally useful and the "heat pump" is used to draw latent heat from a condensing vapor and to raise the temperature level of this heat by compression, so that the salvaged heat may be reused."

When water is evaporated from a solution, the heat needed to produce this vaporization becomes latent in the water vapor which is produced. If steam is used to supply the heat for vaporization, then the only differences between the vapor used and the vapor produced are differences in temperature, pressure, and volume.

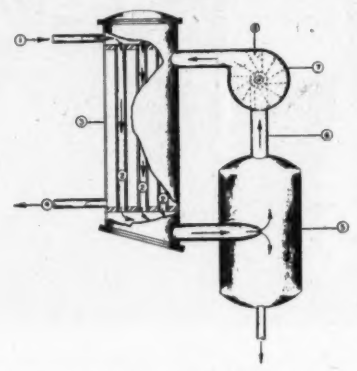
System Needs Smaller Temperature Difference

With ample areas of heat exchange surface, the temperature differences may be quite small, and direct mechanical compression of the low temperature vapor will raise its temperature to the higher heating level. When the volume of vapor to be compressed is reasonably low, this method of recycling latent heat is practical and economical.

For example, as Cross showed in the diagram Fig. 1, sea water may enter a heat pump type of water still at a temperature of 212° F. (1), pass downward through heat exchanger tubes (2), heated by 220° water vapor within the shell (3), in an exchange of heat caused by the 8° temperature difference, heat flows from the vapor condensing at 220° and the distilled water passes out of the exchanger through outlet (4). The salt water in the tubes, absorbing this heat, is partly vaporized and the mixture of brine and vapor enters vapor separator (5), where the brine is separated and discharged from the system through outlet (6), while the 212° water vapor is drawn through compressor (7), compressed to 220° F., and discharged into shell (3), completing the cycle.

The energy needed by the compressor in this system will be only a small fractional part of the heat energy which is recycled. Each one pound of vapor compressed has about

Fig. 1 Sea Water System



(1) Sea Water in 212°. (2) Tubes. (3) Shell. (4) Distilled Water. (5) Vapor Separator. (6) 212° F. Vapor. (7) Vapor Compressor. (8) 220° F. Vapor.

960 B.t.u. of heat, latent in the vapor, and less than 50 B.t.u. of compression energy will be needed to raise the temperature level from 212° to 220°.

Systems using direct mechanical vapor compression have had comparatively little influence upon the evaporation industry, it was explained, for the simple reason that The specific volume of most vapors, at usual evaporative temperatures, is so great, that mechanical compression requires huge, expensive, and inefficient mechanisms, and in general the actual savings in primary steam made by these systems is more than offset by high carrying and maintenance charges upon the inefficient compressors.

Transfer of Latent Heat to Low Volume Vapor

In the water still just described, water vapor has a volume of 26 cu. ft. per pound at 212°, and by compressing this vapor to 220°, 960 B.t.u. of heat can be salvaged. While the volume is quite large in proportion to the heat reclaimed, the system can be made to operate quite economically. If an evaporative temperature of 140° F. is needed, then about 123 cu. ft. of water vapor must be compressed in order to reclaim 1,015 B.t.u. of latent heat, and direct compression then becomes impractical.

When heat sensitive fluids such as orange juice are to be concentrated at temperatures around 60° F., then the compression of 1,208 cu. ft. of vapor yields only 1,060 B.t.u. of salvaged heat, and any consideration of direct vapor compression becomes absurd.

A way to overcome this handicap of high specific volume is so obvious, Cross said, that it is almost incredible that this system was not worked out in detail many years ago. The heat latent in high volume vapor may be readily transferred through a heat exchanger to a low volume vapor, and raising the level of heat of the dense secondary vapor, by mechanical compression, becomes quite practical and economical.

For example, one pound of water vapor, at 60° F., has a volume of 1,208 cu. ft., with 1,058 B.t.u. of latent heat. If this vapor is condensed in the shell of a shell and tube condenser by transfer of its latent heat to NH3, boiling at 45° F., within the tubes, then the net result will be 1 pound of water, and 7.2 cu. ft. of NH3 vapor, saturated at 45° F. By accepting a loss of 15° in specific temperature, the volume of vapor to be compressed for heat salvage has been reduced from 1,208 cu. ft. to 7.2 cu. ft. or 168 to 1. While it is absurd to consider compressing 1,208 cu. ft. in order to salvage 1,058 B.t.u. of heat, the mechanical compression of 7.2 cu. ft. for the reclaiming of this heat becomes sound, practical, and economical.

Fig. 2 illustrates this new system. Orange juice enters the Lo-Temp system at inlet (1), passing downward through exchanger tubes (2), heated by NH3 vapor condensing at about 100° in the shell (3). In an exchange of heat, motivated by a 40° temperature difference, the heating ammonia is condensed into NH3 liquid and passes from the exchanger through outlet (4). The orange juice is partly vaporized at 60° F. and the mixture of concentrate and vapor enters the vapor separator (5), where concentrate falls and is drawn off through outlet (6), while the

(Concluded on Next Page)

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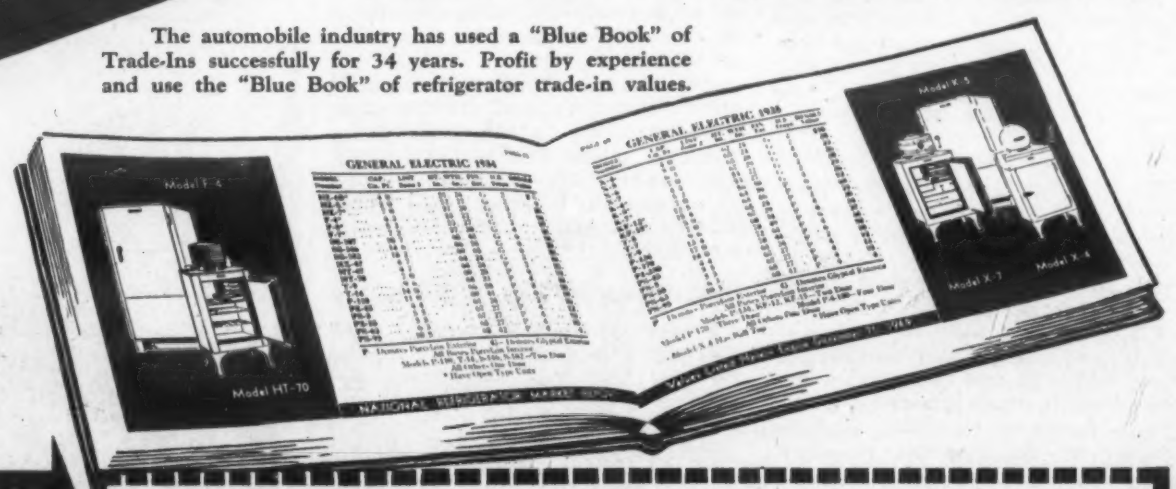

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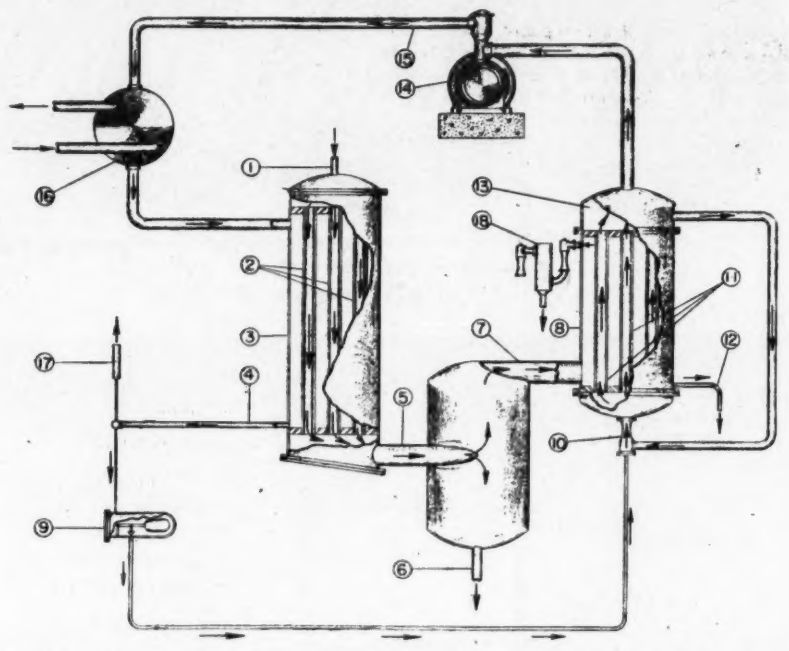
Fig. 2 Ammonia System



(1) Product in. (2) Tubes. (3) Shell. (4) Vaporizer at 60° F. (5) Vapor separator. (6) Concentrate out. (7) Vapor. (8) Shell. (9) NH3 high side liquid float valve. (10) Injector. (11) Tubes. (12) Condensate. (13) Outlet. (14) Compressor. (15) Superheated NH3. (16) Water out—water in. (17) NH3 purger. (18) Evactor.

* * *

'Lo-Temp' System May Be Employed In the Processing of Fruit and Vegetable Juices

(Concluded from Preceding Page)

vapor (7), passes to the shell of exchanger (8).

Liquid NH3 at a temperature of about 100° F. passes through high side trap (9), and injector (10), dropping from high side to low side pressure, and the liquid, cooled to about 45° F. by partial evaporation, passes upward through the tubes (11) of the shell and tube exchanger. In an exchange of latent heat flowing from the condensing water vapor in the shell to the boiling NH3 in the tubes, motivated by the 15° temperature difference, distilled water is produced and withdrawn through outlet (12) and the NH3 vapor, saturated at 45°, passes from the exchanger through outlet (13), to compressor (14). The temperature of the 45° vapor is raised to about 100° F. by compression, with superheat added.

All of the heat transferred from the high side NH3 vapor to the boiling product is tranferred back from condensing water vapor to the boiling low side NH3 liquid. With the exception of insignificant losses, the products system is therefore in perfect thermal balance.

Thermal Balance Achieved

In the NH3 system, however, heat is added to the high side by mechanical compression. This heat must be removed in order to maintain equilibrium in the NH3 system, and this heat is rejected by passing the superheated NH3 gas (15), through the shell of exchanger (16), where the superheat is transferred to water flowing through the tubes, and removed from the system. The desuperheated vapor flows to shell (3), completing the cycle. Non-condensible gasses are vented from the NH3 system through purger (17), and drawn from the water vapor system by ejector (18).

The first commercial installation of this new system was completed in February, 1948, at the frozen concentrate plant of Florida Citrus Canners Cooperative, at Lake Wales, Fla., and used for concentrating orange juice at a temperature of 60° F., with applied heat slightly over 100° F.

The concentrate produced by this pioneering unit, after freezing and distribution through frozen food sales channels, has been the sensation of the frozen food industry, Cross declared.

Following the successful operation of the first unit, production facilities in the Lake Wales plant, and in other Florida and California plants, have multiplied production many times.

System May Have Application To Many Fields

Major applications for this system, now being explored, include other fruit and vegetable juices, liquid whole eggs and egg whites, coffee extracts, pectin solutions, heat sensitive pharmaceuticals, blood serum, and other heat sensitive products. Sometimes these explorations produce unusual results. For example, whole milk may be concentrated 5 to one, and skim milk 6 to one, to about 60% total solids, and still remain quite fluid, when evaporation and heating temperatures are lowered. This quite unexpected result points the way to extended research which may lead to profound changes in present methods of processing and distributing milk products.

"While our investigations up to this time have been confined to the concentration of fluids at low temperatures, this new way to recycle latent heat is by no means restricted to low temperature concentration," Cross stated. "By proper selection of the secondary compression medium, any evaporation temperature within reason may be engineered into this process, and ample exchange surfaces will provide an economy not even approached by any other system of evaporation at moderately low temperatures."

For example, heat exchange surfaces may be readily proportioned for concentrating sucrose solutions, with high side NH3 at 120°, evaporation at about 110°, and low side NH3 at 100°. Fig. 3 illustrates this system.

With sufficient surface provided to reach the equilibrium illustrated in Fig. 3, each 1,000 pounds of water distilled would require the compression of 2,156 pounds of NH3 vapor per hour from 197 pounds to 275 pounds gage pressure. The compressor would need a net displacement of 51 cu. ft. per minute. The mechanical energy needed would be 39,239 B.t.u., and this input energy would recycle 1,031,000 B.t.u., of latent heat, or a gain of about 26 to 1.

Translating the mechanical energy into horse power, the indicated horse power would be 15.4, and brake horse power about 18 hp. per 1,000 pounds of evaporation. If powered by an electric motor, current requirements would be about 13½ k.w.h. per 1,000 pounds of evaporation. If powered by a diesel engine, fuel requirements would be about 7 pounds of fuel oil per 1,000 pounds of evaporation.

A quadruple effect steam evaporator requires about 333 pounds of steam per 1,000 pounds of evaporation, and a good boiler will produce 333 pounds of steam from 28 pounds of fuel, Cross related.

The steam boiler-quadruple effect evaporator system will therefore require four times as much fuel per unit of evaporation as a Lo-Temp evaporator designed for operation with a 20° temperature difference between the high and low sides of the compression cycle.

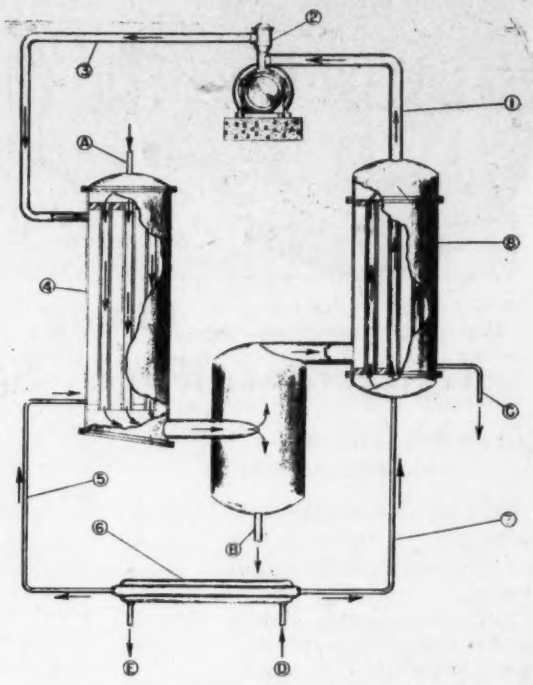
The area of heat exchage surface necessary for operation with a 20° heat head would be costly, and could be justified only for uses requiring 6,000 or 7,000 hours of operation per year. Less surface decreases first cost, but increases both the cost of compression equipment and the cost of operation, Cross said. A careful analysis of each proposed use is necessary to arrive at the optimum balance between first cost and the hourly cost of operation.

Other advantages of the Lo-Temp system in addition to operating economy, were listed by Cross as follows: water use is low and may be eliminated entirely in many cases; evaporation is at one temperature, which may be engineered at any desired point; condensate is all recovered, making this process available for distillation of solvent recovery; no skill is required for operation, and control is almost absurdly simple.

Fig. 3 Concentrating Sucrose Solutions

(1) 2,159 lbs. NH_3 vapor saturated at 100° F. total heat 1,364,748 B.t.u. (2) 39,239 B.t.u. heat of compression added. (3) Total heat superheated NH_3 gas 1,403,987 B.t.u. at 120° condensing temperature. (4) 1,031,000 B.t.u. transferred from NH_3 vapor, condensing at 120° F_u to 1,000 lbs. water vaporizing at 110° F. (5) 2,156 lbs. liquid NH_3 at 115° F. total heat 372,987 B.t.u. (6) 39,329 B.t.u. transferred from liquid NH_3 to flowing water and removed from NH_3 system. (7) 2,156 lbs. NH_3 liquid at 100° F. total heat 333,748 B.t.u. (8) 1,031,000 B.t.u. transferred from water vapor condensing at 110° F. to NH_3 liquid boiling at 100° F.

(A) Product in. (B) Concentrate out. (C) Condensate out. (D) Water in. (E) Water out.



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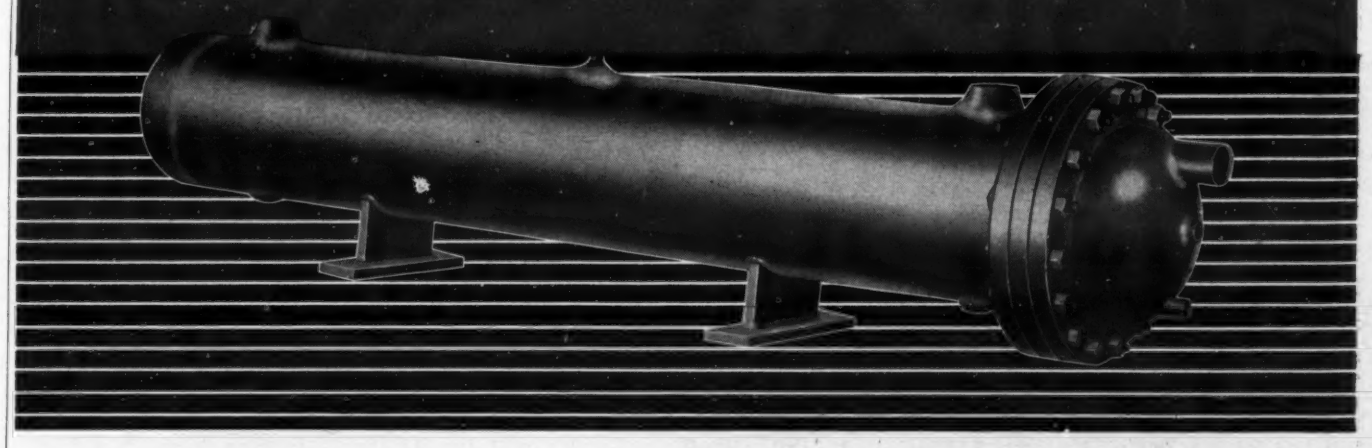

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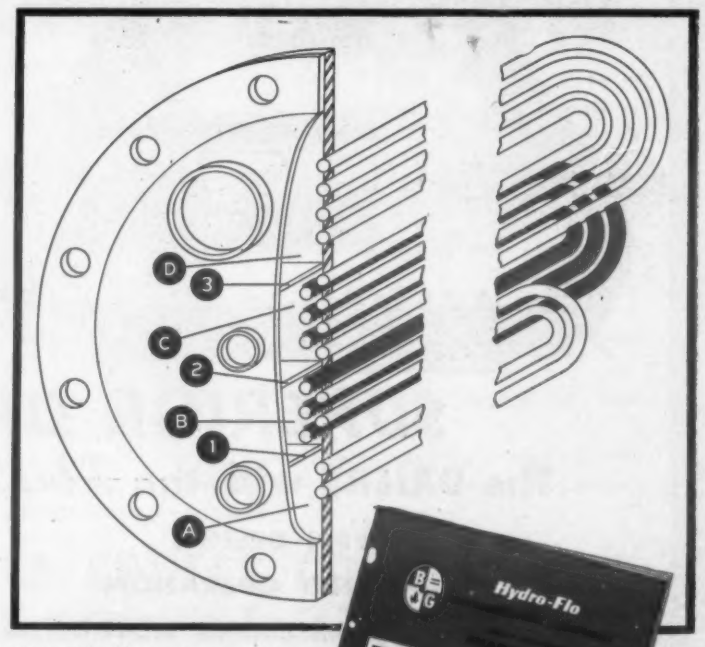
The diagram at right shows how this trouble is prevented in the B & G Evaporator. Note that the lower tube in pass "B" leading to pass "C," and the lower tube in pass "C" leading to pass "D," is located very close to the baffle plate. This design permits any oil entering the passes to travel freely with the Freon vapor back to the compressor. *There is no step-up or sump to trap oil!*

You'll want complete engineering data on this outstanding Evaporator—write today for Catalog BJ-848.



B & G Direct Expansion Evaporators are constructed according to U-69 Code of ASME regulations and can be certified by Hartford Steam Boiler and Inspection Service for 150 lb. working pressure on both Freon and water side.

B&G

Hydro-Flo* REFRIGERATION EQUIPMENT

BELL & GOSSETT COMPANY

Dept. RAX-47, Morton Grove, Ill.

*REG. U. S. PAT. OFF.

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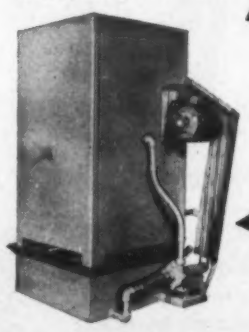
Each packaged Hi-Boy is sold complete—no extras. Simple to install. Every unit acoustically lined to insure quiet performance.



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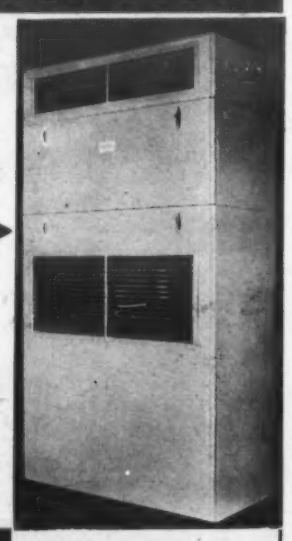

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PEORIA ILLINOIS

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Piping
Refrigerant, Water, Steam (Cont.)

MULTIPLE CONDENSING UNIT INSTALLATIONS

Multiple condensing unit installations may be made in two ways:

1. Separate condensing units, most desirable. (See Figs. 5 and 6.)

2. Interconnecting all compressors, condensers, and evaporator condensers. (See Figs. 7, 8, and 9.)

The simplest and most desirable method is to divide the air conditioning system into separate and smaller systems, using a separate condensing unit for each of the smaller systems. In this manner each small system consisting of the air conditioner and condensing unit will be a separate refrigerant circuit. Each circuit will be as shown in Figs. 5 and 6.

Only in the last resort should interconnecting be used. The interconnecting of compressors, condensers, and evaporator condensers, thus providing the equivalent of a single circuit system with multiple equipment, requires the proper pressure balance, refrigerant, and oil distribution, and oil return.

These installations require special precaution in order to secure adequate and satisfactory operation.

SINGLE COMPRESSOR AND WATER CONDENSER (CONDENSING UNIT)

In order properly to size the refrigerant lines within good practice, pressure drops as given in Table 4a, should be used. Keep refrigerant lines as short as possible.

Tables 1, 2, and 3 should be used for sizing the refrigerant lines. They are based on pressure drops for 100-ft. length of lines.

Read direct for lines 100 ft. long, but for all other lengths, the pressure drop should be corrected for the equivalent pressure drop for 100 ft. before using tables.

Assuming the refrigeration load is 200,000 B.t.u. per hour and the suction temperature of the compressor is 40° F., the liquid and suction lines are each 100 ft. long.

By referring to Table 2, the liquid line can be sized by using a pressure drop of 5 lbs. for the 100 ft. The nearest in table is 2.3 lbs. per 100 ft., which is also below the pressure drop required, to carry 200,000 B.t.u. per hour. In this case the size of the liquid line is ⅞-in. o.d. tubing.

By referring to Table 3, the suction line can be sized by using a pressure drop of 3 lbs. for the 100 ft. The nearest in the table is 2.8 lbs. per 100 ft., which is also below the pressure drop required, to carry 200,000 B.t.u. at 40° F. suction temperature. In this case the size of the suction line is 2⅛-in. o.d. tubing.

EXAMPLE NO. 1

Given: A system as shown in Fig. 5, with a refrigeration load of 100,000 B.t.u. per hour and consisting of two evaporators, one for 70,000 and the other for 30,000 B.t.u. per hour. The system is to operate at 40° F. suction temperature.

a. What is the size of the liquid line AB when its length is 120 ft., 100 ft., 70 ft., 50 ft., 30 ft., 10 ft.?

b. What are the sizes of the liquid line branches BC and BD with each of the above liquid lines lengths?

c. What is the size of the suction line FG when its length is 120 ft., 100 ft., 70 ft., 50 ft., 30 ft., 10 ft.?

d. What are the sizes of the suction line branches GH and GK with each of the above suction line lengths?

a. Find equivalent pressure drop for 100 ft., using pressure drops from Table 4a.

100 ft. / 120 ft. x 5 lbs. = 4.2 lbs. p.d. equivalent to 100 ft.
100 ft. = 5 lbs. p.d.
100 ft. / 70 ft. x 4 lbs. = 5.7 lbs. p.d. equivalent to 100 ft.
100 ft. / 50 ft. x 3 lbs. = 6 lbs. p.d. equivalent to 100 ft.
100 ft. / 30 ft. x 2 lbs. = 6.7 lbs. p.d. equivalent to 100 ft.
100 ft. / 10 ft. x 1 lb. = 10 lbs. p.d. equivalent to 100 ft.

Referring to Table 2, and using 100,000 B.t.u. capacity, the size of the liquid line AB is as follows:

For 120 ft. long @ 4.2 lbs. p.d. per 100 ft. = ¾ in. o.d. tubing.

For 100 ft. long @ 5 lbs. p.d. per 100 ft. = ¾ in. o.d. tubing.

For 70 ft. long @ 5.7 lbs. p.d. per 100 ft. = ⅞ in. o.d. tubing.

For 50 ft. long @ 6 lbs. p.d. per 100 ft. = ⅞ in. o.d. tubing.

For 30 ft. long @ 6.7 lbs. p.d. per 100 ft. = ⅞ in. o.d. tubing.

For 10 ft. long @ 10 lbs. p.d. per 100 ft. = ⅞ in. o.d. tubing.

b. Liquid line branches are usually from 1 to 5 ft. long. In this case use same equivalent pressure drop as calculated above for various lengths of liquid lines respectively.

SIZES OF BRANCHES

Referring to Table 2 and using respective evaporator capacities of 30,000 and 70,000 B.t.u. with respective equivalent pressure drops, the sizes of the liquid line branches BC and BD are as follows:

For 120 ft. long @ 4.2 lbs. p.d. per 100 ft. & 30,000 B.t.u. = ½ in. o.d. tubing BC.

For 120 ft. long @ 4.2 lbs. p.d. per 100 ft. & 70,000 B.t.u. = ⅝ in. o.d. tubing BD.

For 100 ft. long @ 5 lbs. p.d. per 100 ft. & 30,000 B.t.u. = ½ in. o.d. tubing BC.

For 100 ft. long @ 5 lbs. p.d. per 100 ft. & 70,000 B.t.u. = ⅝ in. o.d. tubing BD.

For 70 ft. long @ 5.7 lbs. p.d. per 100 ft. & 30,000 B.t.u. = ½ in. o.d. tubing BC.

For 70 ft. long @ 5.7 lbs. p.d. per 100 ft. & 70,000 B.t.u. = ⅝ in. o.d. tubing BD.

For 50 ft. long @ 6 lbs. p.d. per 100 ft. & 30,000 B.t.u. = ½ in. o.d. tubing BC.

For 50 ft. long @ 6 lbs. p.d. per 100 ft. & 70,000 B.t.u. = ⅝ in. o.d. tubing BD.

For 30 ft. long @ 6.7 lbs. p.d. per 100 ft. & 30,000 B.t.u. = ½ in. o.d. tubing BC.

For 30 ft. long @ 6.7 lbs. p.d. per 100 ft. & 70,000 B.t.u. = ⅝ in. o.d. tubing BD.

For 10 ft. long @ 10 lbs. p.d. per 100 ft. & 30,000 B.t.u. = ½ in. o.d. tubing BC.

For 10 ft. long @ 10 lbs. p.d. per 100 ft. & 70,000 B.t.u. = ⅝ in. o.d. tubing BD.

c. Find equivalent pressure drop for 100 ft., using pressure drop from Table 4a.

100 ft. / 120 ft. x 3 lbs. = 2.5 lbs. p.d. equivalent to 100 ft.
100 ft. = 3 lbs. p.d.
100 ft. / 70 ft. x 2.5 lbs. = 3.6 lbs. p.d. equivalent to 100 ft.
100 ft. / 50 ft. x 2 lbs. = 4 lbs. p.d. equivalent to 100 ft.
100 ft. / 30 ft. x 1.5 lbs. = 5 lbs. p.d. equivalent to 100 ft.
100 ft. / 10 ft. x 1 lb. = 10 p.d. equivalent to 100 ft.

Referring to Table 3, and using 100,000 B.t.u. capacity and 40° F. suction temperature, the size of the suction line FG is as follows:

For 120 ft. long @ 2.5 lbs. p.d. per 100 ft. = 2⅛-in. o.d. tubing

For 100 ft. long @ 3 lbs. p.d. per 100 ft. = 2⅛-in. o.d. tubing.

For 70 ft. long @ 3.6 lbs. p.d. per 100 ft. = 2⅛-in. o.d. tubing.

For 50 ft. long @ 4 lbs. p. d. per 100 ft. = 1⅝-in. o.d. tubing.

For 30 ft. long @ 5 lbs. p.d. per 100 ft. = 1⅝-in. o.d. tubing.

For 10 ft. long @ 10 lbs. p.d. per 100 ft. = 1⅜-in. o.d. tubing.

d. Suction line branches are usually from 2 to 10 ft. long.

In this case use same equivalent pressure drop as calculated above for various lengths of suction lines respectively.

Referring to Table 3 and using respective evaporator capacities of 30,000 and 70,000 B.t.u. at 40° F. suction temperature, and with respective equivalent pressure drops, the sizes of the suction line branches GH and GK are as follows:

For 120 ft. long @ 2.5 lbs. p.d. per 100 ft. & 30,000 B.t.u. = 1⅛-in. o.d. tubing GH.

For 120 ft. long @ 2.5 lbs. p.d. per 100 ft. & 70,000 B.t.u. = 1⅝-in. o.d. tubing GK.

For 100 ft. long @ 3 lbs. p.d. per 100 ft. & 30,000 B.t.u. = 1⅛-in. o.d. tubing GH.

For 100 ft. long @ 3 lbs. p.d. per 100 ft. & 70,000 B.t.u. = 1⅝-in. o.d. tubing GK.

For 70 ft. long @ 3.6 lbs. p.d. per 100 ft. & 30,000 B.t.u. = 1⅛-in. o.d. tubing GH.

For 70 ft. long @ 3.6 lbs. p.d. per 100 ft. & 70,000 B.t.u. = 1⅜-in. o.d. tubing GK.

For 50 ft. long @ 4 lbs. p.d. per 100 ft. & 30,000 B.t.u. = 1⅛-in. o.d. tubing GH.

For 50 ft. long @ 4 lbs. p.d. per 100 ft. & 70,000 B.t.u. = 1⅜-in. o.d. tubing GK.

For 30 ft. long @ 5 lbs. p.d. per 100 ft. & 30,000 B.t.u. = 1⅛-in. o.d. tubing GH.

For 30 ft. long @ 5 lbs. p.d. per 100 ft. & 70,000 B.t.u. = 1⅜-in. o.d. tubing GK.

For 10 ft. long @ 10 lbs. p.d. per 100 ft. & 30,000 B.t.u. = 1⅛-in. o.d. tubing GH.

For 10 ft. long @ 10 lbs. p.d. per 100 ft. & 70,000 B.t.u. = 1⅜-in. o.d. tubing GK.

For other conditions, where the liquid and suction lines are for other lengths than as above and also of different carrying capacities, calculate sizes in the same manner.

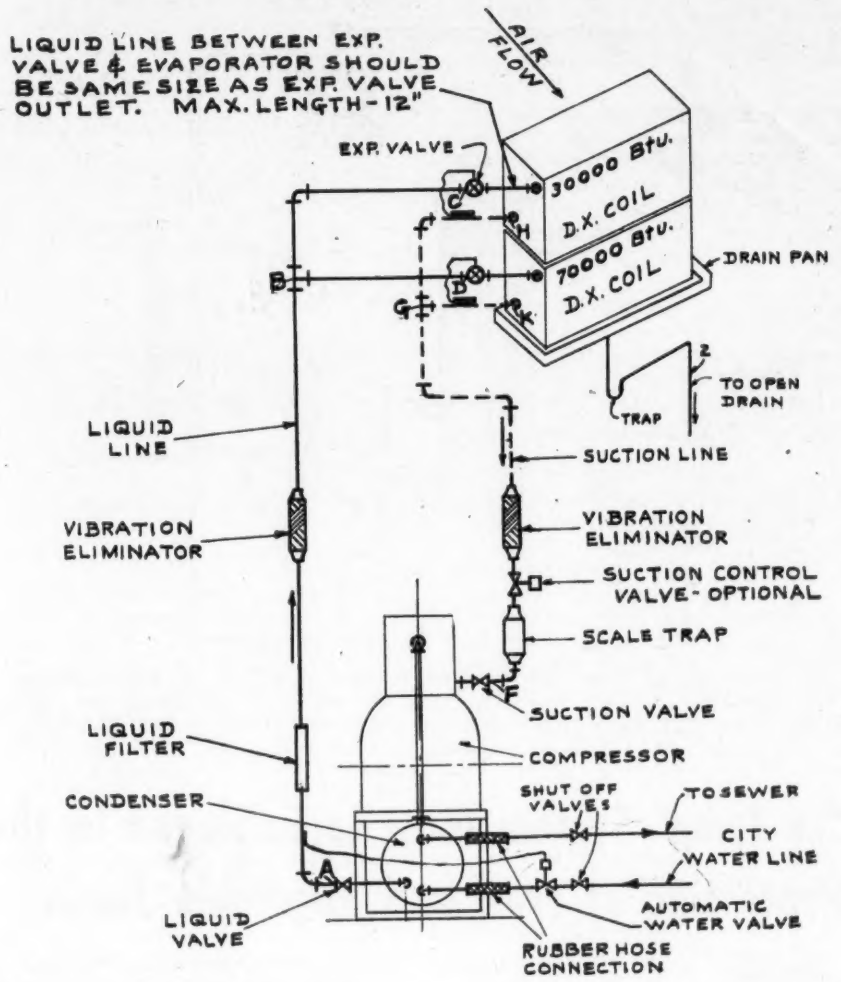
Fig. 5 also shows the auxiliary equipment to be used on these types of systems.

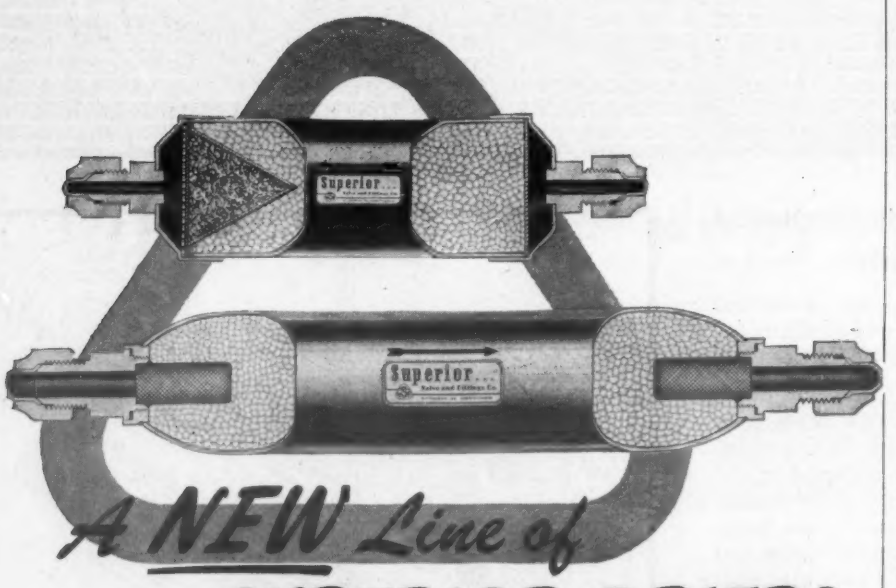
(To Be Continued)

Table 4a—Recommended Pressure Drops In Refrigerant Lines

Length of Refrigerant Line In Feet	Pressure Drop In Pounds per Square Inch Liquid Line	Suction Line	Hot Gas Line
80 to 100 & over	5.0	3.0	5.0
60 to 80	4.0	2.5	4.0
40 to 60	3.0	2.0	3.0
20 to 40	2.0	1.5	2.0
20 & less	1.0	1.0	1.0

Fig. 5—Typical Piping Connection for Single Compressor





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WORLD TRADE NEWS

Service 'Know-How' for Export

A group of Frigidaire overseas service representatives inspect a new self-service display case as a part of their comprehensive study of new products during a special factory service school held in Dayton. From left to right, they are: W. Van Schaik, Belgium; John Bayne, Trinidad; P. Esteva, Dominican Republic; and Roger Draper, Puerto Rico.

* * *

Frigidaire Launches Service Training School For Representatives In 21 Foreign Lands

DAYTON, Ohio — A long-range service training program, designed to reach world-wide proportions, was launched here by Frigidaire Div. of General Motors with a special five-week training school initiated for key service representatives from 21 foreign countries.

Joint announcement of the vast new training program was made by P. W. Copelin, of New York City, manager of the Frigidaire Div., General Motors Overseas Operations, and L. C. Shannon, of Dayton, Canadian and export department manager.

As explained by Shannon, the foreign service representatives studied service techniques for products not yet generally released for sale overseas, in addition to a general refresher course of training on all products. Upon completing the Dayton course, members of the group were to return to overseas headquarters to conduct a series of similar schools for hundreds of servicemen in their respective countries.

"This new program is in accordance with Frigidaire and General Motors policy of keeping service facilities abreast with product sales," Shannon declared. "Products are not released to the markets until overseas organizations are equipped to handle the field service operation."

Among the products covered during the just-completed five-week training period were refrigerators, electric ranges, water heaters, laundry equipment, beverage coolers, household and commercial sealed rotary "Meter-Miser" compressors, air conditioning equipment, ice cream cabinets, and home and farm freezers.

In addition to special instruction on new products, other important subjects covered were: "History and Fundamentals of Refrigeration," "Conducting Overseas Service Schools," "Hiring and Teaching New Employes," and "Dealer Service Operations and Organization."

To punch home up-to-the-minute service techniques, a host of scripts, charts, sound motion pictures, slide films, home study courses, reference guides, manuals, and special demonstrations were employed by the school teaching staff.

All material, including elaborate viso-trainers and electrical demonstration boards, will be made available to foreign service representatives for overseas training schools when the Dayton course ends.

The school was under the direction of D. W. Van Patten, export technical and service manager. Cooperating with the Canadian and export department was the factory service department headed by Manager E. E. Landis. Product service specialists, drawn from the factory's service technical department, made up the school's special faculty.

Each of the representatives who attended is a service manager or technician employed either by a General Motors Overseas division distributor, a GM overseas assembly plant, or at Frigidaire's Canadian plant at Leaside, Ont.

Included in the group were: John Bayne, Trinidad; Alex Baer, Philippines; C. Kerim, Syria and Lebanon; Roger Draper, Puerto Rico; Jose A. Villar, Cuba; P. Esteva, Dominican Republic; R. Fairgrieve, India; Felipe Figueroa, Mexico; B. Van Benschoten, Hawaii; Alfred Lawee, Iraq and Iran; J. Mestre, Panama; Jorge Rugitsky, Brazil; E. L. R. Nealon, Uruguay; Cedric Salter, Hong Kong; W. Van Schaik and S. E. Cols, Belgium; M. J. Constant, France; R. N. Miners, New Zealand; J. A. R. Polson, Australia; R. H. Gracey and G. Millikin, Canada.

A special traveling group of overseas representatives, operating out of New York, will follow-up with training information for countries not represented at the Dayton school.

Windowless Dept. Store In Bogota Air Conditioned

SYRACUSE, N. Y.—Housed in a new $1,000,000 windowless, completely air conditioned structure, the Valdiri department store in Bogota, Colombia, now occupies one of the most modern store buildings in South America, according to officials of Carrier Corp. here, which supplied the air conditioning equipment.

"Comfort air conditioning is unusual in Bogota, which is situated 9,000 ft. above sea level, and generally cool in summer," it was pointed out. "Its use resulted from the determination of the store's owner, Daniel Valdiri y Hijos, to incorporate in his new building every modern facility available for store operation."

The air conditioning system was installed by Interamericana, S.A., Carrier representative in Bogota.

Six Air Conditioning Units Installed In Veracruz Theater

VERACRUZ, Mexico—Six air conditioning units have been installed in a new 5,500-seat theater, the Teatro Reforma, which was recently opened here.

Survey Finds Only 43% Of Canadian Wired Homes Have Electric Refrigerators

WASHINGTON, D. C.—A recent survey of 1,000 typical homes in Canada revealed that although 91% are wired, only 43% use electric refrigerators, it was reported by the Office of International Trade, U. S. Department of Commerce.

About 37% of the refrigerators, 50% of the electric washing machines, and many small appliances in use were 10 or more years old, the survey showed. Quoting the Canadian press, OIT said the survey disclosed that the following other electrical appliances are in use to the percentage indicated:

Ranges, 31.2%; washing machines, 76%; irons, 88%; toasters, 82%; vacuum cleaners, 67%; food mixers, 18%; hot plates, 38%; blankets, 2%; heating pads, 32%; portable heaters, 21%; and heaters, 5%.

About 19% of the householders queried said they intend to purchase electric ranges and around 20% indicated they plan to buy new electric washing machines.

Brazil Refrigerator Factory Sought by Spanish Firm

RIO DE JANEIRO, Brazil — A Spanish concern wishing to manufacture electric refrigerators and a Swiss firm desiring to produce vacuum cleaners and supplies are among the 46 European industries which have indicated they want to install factories in Brazil, according to a report by the Federal Trade Board.

The board said Brazil imported $10,000,000 worth of refrigerators from January to September, 1948. The feeling is that if these refrigerators had been manufactured here, their prices would have been low enough to place them within the reach of the poorer classes.

Zone Cooling System Used In Durban's Dunlop House

SYRACUSE, N. Y.—Dunlop House, a three-story laboratory and office structure in Durban, South Africa, has been air conditioned with equipment supplied by Carrier Corp., Heman Greenwood, vice president in charge of Carrier's International Div., has announced.

It is being occupied by Dunlop South Africa, Ltd., an associated company of Dunlop Tire & Rubber Corp., Buffalo. The air conditioning installation was made by Air Conditioning & Engineering Co. (Natal), Ltd., Carrier representative in Natal Province.

C. A. Christiersen, general manager of Air Conditioning & Engineering Co., who recently visited Carrier's International Div. headquarters in New York, stated that the Dunlop House is one of the most modern buildings in South Africa.

The main office block has been completely air conditioned. The system is designed for three zones, with one common return fan. The installation has two "Freon-12" belt-driven compressors, two evaporative condensers, and one centrifugal fan, in addition to auxiliary equipment.

An interesting architectural feature of the building is the series of vertical fins in front of the windows on the western and eastern sides of the building to prevent direct sunlight from striking the glass, thus easing the load on the air conditioning system, Carrier pointed out. This method of construction has become very popular in Brazil and other countries where sunlight is a strong factor in heat loads.

Cold Storage Plant Planned To Serve Amazon Region

WASHINGTON, D. C.—Plans are reported to be under way for the construction of a modern cold storage plant in Manaus, Amazonas, Brazil, the Office of International Trade, U. S. Department of Commerce, said.

"The plant is needed for the storage of beef, fish, and vegetables, which, for the lack of refrigeration, often spoil when the supply is abundant," the agency reported.

Xmas May Be Over, But the Idea Is Still Good

This spectacular sign, which could be seen for miles, was mounted atop one of the buildings of San Miguel & Compania, San Juan, Puerto Rico, during Christmas season. Display was conceived by G. A. Brunelle, manager of firm's Refrigeration Div. Company claims display, featuring 49-ft.-high Santa Claus and actual floor models of International Harvester refrigerator and freezer, and Tappan stove, was first of its kind ever used in Carribean area.

Panelyte To Be Made, Sold By Firms In England, Sweden

NEW YORK CITY—The Panelyte Div. of St. Regis Paper Co., producer of laminated plastics, has announced consumation of technical aid agreements for the manufacture and sale of Panelyte by companies in England and Sweden.

According to C. Russell Mahaney, St. Regis vice president and Panelyte general manager, production and patent license agreements were signed by G. P. Bassett, director, Ashdowns, Ltd., Eccleston, St. Helens, England, and Otto Wendt, president, Skanska Attikfabriken, AB., Perstorp, Sweden.

Terms of the agreement provide the Ashdown company with production and sale rights of Panelyte in the British Isles, excluding Eire, and the Skanska company with rights in Sweden, Finland, Norway, and Denmark. However, the agreements do not limit either of the two concerns or the St. Regis company in sales of Panelyte products in any area abroad.

Among other things, Panelyte is used as breaker strips and inner refrigerator doors and surfaces for soda fountains, counters, display cases, and similar types of equipment.

Bizonal Germany Exports $37,958 In Electric Machinery

WASHINGTON, D. C.—Electrical machinery exported from the Bizonal Area of Germany in the first half of 1948 included air conditioning and refrigeration equipment valued at $37,958, the Joint Export-Import Agency reported.

Canadian Dealership Opens

TORONTO, Ont., Can. — Nicol's Electric Co., Ltd., has opened a new appliance and radio showroom at 2802 Danforth.

Mumma Heads Export for Black, Sivalls & Bryson

KANSAS CITY, Mo.—Arthur J. Smith, president of Black, Sivalls & Bryson, Inc., has announced the appointment of General Harlan L. Mumma, U. S. A., Retired, as world export manager of the company with headquarters at 30 Rockefeller Plaza, New York City.

General Mumma was retired from the United States Army in April, 1948, after 36 years of active service. From 1938 until January, 1941, he was assigned to the New York Port of Embarkation where he was assistant superintendent of the Army Transport Service.

In January, 1941, he was transferred to the West Coast as Quartermaster of the III Army Corps.. In June, 1941, he was transferred to the Caribbean theatre where he became chief of supply and chief of transportation of the Panal Canal department.

Berritt Heads South

NEW YORK CITY—Philip H. Berritt, American Refrigeration Export Co., is now touring Central America, Latin America, and the Caribbean.

Another First for LA CROSSE

the new GLASS CHILLER

- 2 separate compartments each 4-cubic ft. capacity.
- Each compartment will hold about 200 heavy mugs.
- Fast, easy operating top sliding doors insures minimum cold spillage.
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Again, La Crosse leads the field with this new mechanically refrigerated Glass Chiller unit. Especially designed for use where present legislation prohibits wet refrigeration of glasses.

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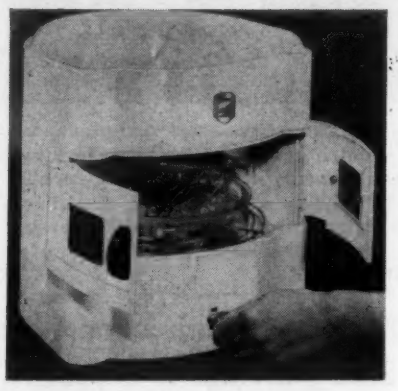
What's New

High Speed Claimed for Infrared Ray Cooker



CHICAGO—A new cooking unit that cooks food by infrared rays in 30 to 60% less time than conventional methods has been introduced by the Dorby Co., Merchandise Mart here.

Called the Dorby Cooker, the unit is said to heat the food directly and not the utensils in which the food is held. As Samuel N. Becker, Dorby president explains, the rays from the infrared lamps above and below the food contact the food without resistance or interference from the clear heat resistant glass dish.

"The food is cooked without the conventional heating of the dish or the air in and around the cooker," he added. This, he noted, is because of the superfast speed of cooking. He claimed that steaks can be cooked in from 1½ to 6 min. and pies and cakes from 8 to 12 minutes.

"By the direct and superfast application of heat to food," he declared, "the natural juices remain in the food instead of running onto the pan and evaporating." He pointed out that foods can even be cooked in cellophane wrappers, thereby eliminating the need to dirty the dish used in cooking. Frozen foods can be cooked without defrosting and frozen vegetables do not require added water.

The source of energy of the Dorby Cooker is two 500-watt infrared lamps especially designed and manufactured by the General Electric Co. for the Dorby Cooker. The lamps are rated at 5,000 hours and are constructed of heat resistant clear Pyrex.

The cooker is 15 in. high, 12 in. wide, and weighs 13 lbs. It is finished in white baked enamel and the entire unit is made of heavy gauge steel. It operates on 110-120-volt a.c. or d.c. current.

The company claims that the infrared rays are not harmful in any respect, but due to the intensity of the light, doors have been provided to eliminate the glare.

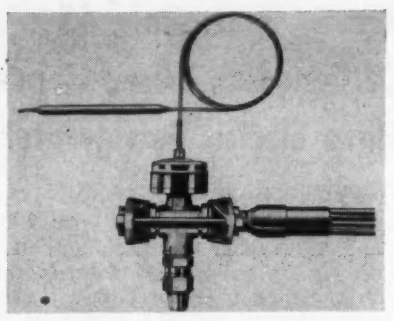
Inventor of the new cooker is Herman Dorfman, who conceived the idea while a science student at the University of Chicago. He later renewed the study of this new cooking principle with the cooperation of the engineering and infrared lamp divi-divisions of General Electric Co.

The cooker is designed to retail at $41.95, including Federal excise tax.

Emerson Bulletin Describes Capacitor-Start Motors

ST. LOUIS—The complete line of Emerson-Electric capacitor-start motors is pictured and described in a four-page bulletin offered by the Emerson Electric Mfg. Co. here.

Included are details of construction of the various parts of motors, complete dimensions, diagrams, and performance in accordance with NEMA fractional horsepower motor standards. A copy of the bulletin (X6157) will be mailed to those requesting it on their company stationery.



A-P 216 Valve Features Multi-Outlet Distributor

MILWAUKEE—A new model 216 A-P thermostatic expansion valve that features a multi-outlet distributor which makes possible accurate, uniform feeding of refrigerant to the coil has been announced by Automatic Products Co. here.

Any number of outlets, up to 12, can be fed simultaneously, the company said.

Multi-outlet distributors, available in "straight" or "mushroom" types, can be hooked up to the model 216 expansion valve after they are connected to the coil.

This design feature simplifies both installation and inspection. Principal advantage of the new distributor is that it leads to top coil efficiency for maximum refrigeration, the manufacturer stated.

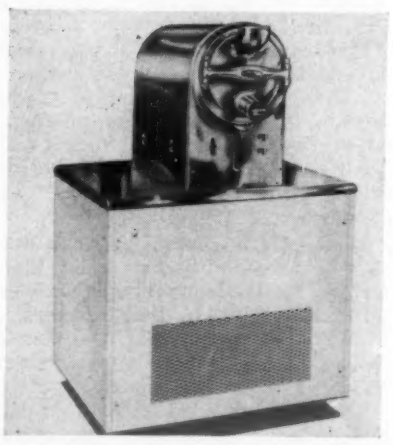
The expansion valve itself is small and easily handled—a liquid-charged unit that can be mounted in any position or ambient temperature with no effect on bulb accuracy.

It is equipped with an extra diaphragm unit that limits operating suction pressure to a 55-lb. setting. This diaphragm counteracts the main diaphragm if suction pressure becomes excessive.

When there is no longer an overload, the valve reverts to normal operation, controlling superheat with its thermostatic bulb and main diaphragm. The valve is set at standard superheat but has an adjustable range for any application. Capacities are 3.6, 7, and 11 tons; with the multi-outlet distributor, 3, 6.5, and 10 tons.

Model 216 expansion valve is completely described in a new bulletin, available on request to the company at 2460 N. 32nd St., Milwaukee 10.

Ice Cream Freezers Claim Improved Beater Design



BELOIT, Wis.—A new line of Taylor freezers that has been completely redesigned so that the freezer will serve a cold, stiff frozen custard directly or produce ice cream with 100% overrun for drawing off into cans or packages has been introduced by Tekni-Craft here.

The line consists of 6-qt., 10-qt., and 20-qt. freezers using ⅓-hp., ½-hp., and 1-hp. beater motors respectively.

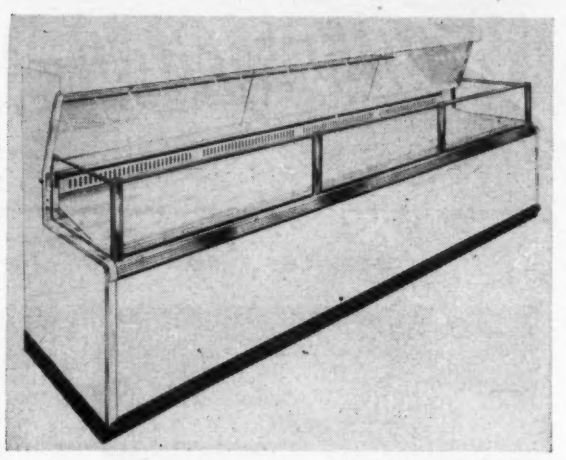
Outstanding feature of the new freezer is the new beater design, according to the company. The beater is made of stainless steel and is silver soldered. It is claimed to obtain maximum overrun for any desired temperature and aids in giving faster ejection.

Tests on the 10-qt. model, the company said, have shown that the freezer will freeze down to 20° F. and eject the batch in one minute. All except a pint or less is drawn off.

Beater motors are rubber-mounted and steel gears are used. Beater and refrigeration controls have been reduced to three: temperature control knob, toggle switch for beater, and toggle switch for refrigeration. All switches are completely enclosed.

Combination units, with hardening and mix storage facilities as well as freezing are also available, Tekni-Craft asserted.

Hussmann Model OTM for Continuous Displays



This is the new Hussmann Model OTM self-serve meat case designed to allow for continuous displays. The case comes in 11-ft. lengths.

ST. LOUIS—Designed for use in continuous displays, a new self-service meat case, called the model OTM, has been introduced by Hussmann Refrigeration, Inc. here.

The new case, which comes in 11-ft. lengths, can also be used in many instances for a self-service refrigerator in the dairy, delicatessen, or vegetable departments, the manufacturer said.

When intended to be used in continuous display, the manufacturer supplies a set of materials for joining the cases together and provides end panels and glass end returns for the extreme ends of each such installation.

A feature of the new case is the four shelf adjustments provided at the back of the case and the three in front. They allow the shelf to be raised or lowered as required by the products being displayed, the company explained.

A clear-view mirror is mounted on a heavily insulated panel in the superstructure.

This case will be available with lower storage model ODM in 7-ft. or 11-ft. lengths, the company announced.

Lynbrook Co. To Produce New Portable Dishwasher

MUSKOGEE, Okla. — A portable electric dishwasher that will carry a list price of $89.50, f.o.b. Garland, Tex. will be introduced in April by the Lynbrook Co. here, John Lynch, vice president and treasurer, has announced.

Capacity of the Lynbrook dishwasher is said to be adequate for a family of six persons.

Called the Lynbrook Magic dishwasher, the unit has a direct-driven impeller revolving at 1,750 r.p.m. that throws a deluge of water over the dishes, washing, rinsing, and sterilizing them.

The same impeller throws out a stream of air that dries the heated dishes which, it is said, remain untouched in the cabinet until again used.

To operate, the housewife scrapes her dishes and puts them in the dishwasher. Then she runs scalding water into the unit through an attached hose, adds a little soap, and turns the unit on.

In about five minutes she opens a two-way valve, runs out the soapy water, and gives the dishes a quick rinse with scalding water. After a few minutes, she drains the rinse water and turns on the motor for drying.

Portable dishwasher.

When the dishes are dry, she turns the motor off and the dishes are ready for the next meal.

A 110-volt, ⅛-hp. motor that operates on 60-cycle a.c. only, is located in a dome on top of the unit. It motivates the impeller which is at the bottom of the unit, below the dish rack. Fill and drain hoses extend across the bottom of the dishwasher.

Net space required for the Lynbrook dishwasher is 16 in. wide, 29 in. high, and 16 in. deep, less handles.

A portable stand that measures 17 by 17 by 36 in. is available at $10, f.o.b. Garland.

Address of the Lynbrook Co. is Box 1634, Muskogee.

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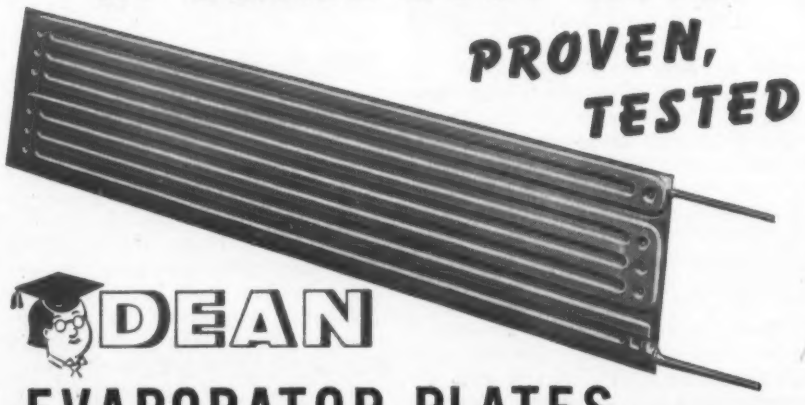

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At Zeller's Refrigeration Co. price of each reconditioned refrigerator is painted on front of model in letters 8 in. high. Easily-read price, Zeller says, acts as sales stimulant.

* * *

Tag Itemizing Work Done Proves Strong 'Convincer' In Used Refrigerator Sales

DENVER—Entering all phases of refrigeration service, and building a rapid-moving used-refrigerator sales department, have shown excellent results for Zeller's Refrigeration Co., at 220 S. Broadway, here.

Harold S. Zeller, head of the firm, went into refrigeration service work three weeks after his return from military service. As an ex-G.I., he had good luck in obtaining enough parts and equipment to set up a complete machine repair shop.

Before getting into extensive home refrigerator repairs, Zeller went around to Denver's appliance retailers, and introduced himself, offering to handle all of their trade-ins, make deliveries, repairs, etc.

PERSONAL CALLS HELPED START

These personal calls paid off to the extent that Zeller now handles all installation and repair work for a dozen leading appliance dealers, at a flat rate. The arrangement also provides Zeller with a constant flow of used refrigerators which can be reconditioned and sold through his small showroom on South Broadway.

To make possible economical refrigerator rebuilding, as well as to open up the commercial field, Zeller's next step was to set up an electric motor department. The department maintains a stock of exchange motors, and is equipped for rewinding armatures, replacing bearings, housing, etc. Backed up with this equipment, the ex-G.I. went aggressively into the commercial refrigeration market, and because he can handle any type of refrigeration or electrical trouble, landed many foodstore, ice cream plant, locker plant, and general refrigeration accounts.

Zeller has built domestic refrigeration service up to the point where the company now has 6 full-time mechanics. The crew covers all of Denver, Littleton, Aurora, Englewood, and other suburbs at a flat rate of $3 per hour.

The crew is dispatched by Mrs. Zeller, who makes up daily time sheets and work schedules from a desk in the showroom, averaging 6 to 9 calls per man.

"We have been surprised at the continuously heavy demand for service work," Zeller said. "Apparently, many homeowners are hanging on to their old boxes, waiting for new-refrigerator prices to go down.

DEALERS GLAD TO GET RID OF USED REFRIGERATORS

One of Zeller's most profitable operations is used-refrigerator reconditioning and sales. Originally he intended to rebuild for dealers, but found that most of them were glad to "get rid of trade-ins" for the allowance price.

Therefore, all 6 men on the crew work regularly on rebuilding trade-in boxes, utilizing "slack hours" between service calls for this work. Each refrigerator is completely torn down, hardware and metal parts replaced, thoroughly tested, and refinished if necessary, before going on display in the Zeller showroom.

There are always from 6 to 10 used boxes lined up on the showroom wall, ranging from $109.95 up to as high as $200. Each box on display is accompanied by a net tag itemizing the work which was done on it, and the price is painted with black water-colors, 8 in. high, on the front.

This simple innovation, which makes prices easily readable across the street, has brought in hundreds of low-income customers, Zeller has found, and keeps used refrigerators moving as rapidly as the shop can turn them out.

"If the customer wants a particular make or size of box, she can leave her name and address, and we will telephone her when we receive one," Zeller said. "This has created a lot of goodwill, and free advertising for us."

Due to the use of spare time hours for refrigerator rebuilding and the fact that the company can turn out its own electric motors, Zeller averages 35, 45, and even 50% profit on his trade-ins.

"The furniture firms and appliance dealers whom we service with deliveries and repairs cheerfully recommend us to customers looking for used boxes," he said. "Because of this, it may be necessary to expand our refrigerator rebuilding department considerably in the future."

Booklet Cites Need for Modern Wiring of Homes

PITTSBURGH—A new 8-page booklet entitled "Modern Electrification Helps Sell New Homes" has been prepared for builders by the Better Homes Bureau of the Westinghouse Electric Corp.

The booklet, which advocates the incorporation of a "basic electrical package" in new homes to stimulate faster sales, describes with diagrams the wiring harness necessary to achieve modern home electrification and presents in detail minimum wiring requirements and a suggested wiring specification. Standards for kitchen and laundry layouts are also included.

Copies of the booklet (B-4294), may be obtained from the Better Homes Bureau of the Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30.

Harry R. Bacon Named To Head Dealer's Frigidaire Department

ATLANTA—Holzman's here has announced the appointment of Harry R. Bacon as manager of its new second floor Frigidaire appliance department, which opened Feb. 28.

Bacon has been active in the refrigeration field since 1928 and associated with Frigidaire until World War II, when he entered the armed forces. Since the war he has been active in the Frigidaire field in a number of dealership managerial capacities.

Rheem Mfg. Net Sales, Profit Show Slight Drop During 1948

NEW YORK CITY—Net sales and net income of the Rheem Mfg. Co. for the year 1948 were slightly below 1947 figures, the company has announced.

Net sales were $58,744,097 in 1948 and $60,258,287 in 1947. Net income was $3,162,903 or $3.04 per share last year and $3,606,915, or $3.48 per share in 1947.

Utility's Dealer Survey Indicates Over Half Have Their Own Service Depts.

BIRMINGHAM, Ala.—In a survey conducted last year covering 1,000 electrical appliance dealers in its territory, the Alabama Power Co. learned that slightly more than half had entered the appliance business since 1941, now have their own service departments, and finance their own time payment sales.

The utility, which serves most of Alabama outside the Birmingham area, also discovered that 27.7% of the appliance dealerships were also furniture stores.

Outstanding exceptions to this ratio popped up in Mobile, largest city served by the utility, and Demopolis. In Mobile, 20 out of 36 dealers were specialty stores and 12 were furniture stores. In Demopolis, five out of 11 dealers were electrical specialty stores.

Other type outlets handling appliances followed in this order: hardware 14.7%, automotive 12.4%, variety 6.8%, department 4.8%, electrical contractors 3.3%, plumbing and heating 3.2%, farm equipment 3%, electrical appliance service shops 2.9%, and national chains 2.8%.

Of the 1,000 dealers reporting, the survey determined that 281 handled gas as well as electrical appliances.

Of the 453 dealers who did not finance their own time payment sales entirely, 152 financed part of them and turned the rest over to a finance company or local bank. The remaining 301 sold all their instalment paper either to the bank or the finance company.

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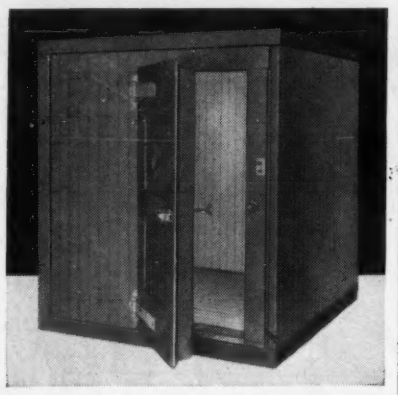

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INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

a long, slow look at any government or union bureau as it plods in slow-motion through its daily "work."

Civil "servants" are the most adept job-stretcher-outers of our times—bar none.

All the stretch-the-job-out-longer A. F. of L unioneers (carpenters, bricklayers, painters, etc. — those Princes of Privilege who collect 10 hours pay for five or six hours of honest toil) could learn a thing or two from intrenched bureaucrats.

The A. F. of L. slow-down clowns are amateurs, really, in this league. Deplorable as some of their feather-bedding practices are, they haven't sunk to the depths of work-sabotaging which thousands of career bureaucrats in the Civil Service hierarchy regard as their sacrosanct privilege.

What's worse: some civil "servants," like some union bosses, accept and even demand bribes on occasion.

Mainly, though, they're interested in waiting out their retirement pension provisions, and in holding onto their soft jobs. They do as little as they can so long as they can—because that's how they preserve their unearned "security" and their flagrantly unproductive sinecures. Their motto:

"Why work or struggle or stick your neck out? Take it easy and you'll last longer."

Definition of a parisitic time-waster who revels in his bureaucratic or union-made "right" to a lifetime easy job:

He is a self-satisfied, lackluster stuffed shirt who is always ready to criticize his bosses (behind their backs) and always happy to advise any willing junior employe how to assist him in consuming time during stipulated working hours.

He has a tremendous yen to preserve his party-given "right" to regular paychecks he doesn't deserve.

He's also the atypical "heel" who preens his ego by "telling off" a minor employe, a lesser-well-off bureaucrat, or even a small businessman who may approach him for help.

He's an authoritarian and an egocentric; he's a congenital loafer and a determined obfuscater. He's a waster, a profligate, and an exploiter.

Give him an inch and he will option a square mile.

He knows best, of course, what *you* should do. But when you ask him what *he* is doing to promote tolerance and progress and Free Enterprise, you'll draw a blank.

The typical bureaucrat overemphasizes his own authority, and underestimates the cumulative wrath of his fed-up adversaries.

He reminds all of us lesser fellows *overbearingly* that he's a Big Shot. He flaunts his "gold-bricking," he multiplies our troubles, and he solidifies his unwarranted "rights" while causing high-minded citizens to feel like fools.

Precedent, protocol, and self-preservation are his watchwords. The ideals of service and Help and Progress he sloughs off scornfully.

Tough to Buck

It's no wonder that vigorous youth movements and resurrected republicanism (which can be defined as a resurgence of personal responsibility combined with a team-work belief in America's glorious destiny) sometimes founder helplessly when confronted with entrenched bureaucratic obstinacy.

They just can't cope with the dealweight of Precedent and Privilege.

The Bureaucrats overawe us; then they overpower us.

Even though we realize that they're wrong, either we're too supine and inert to break the chains with which they have bound us, or their power has become so strong that we lack the leverage.

Nevertheless, we insist that:

There is no middle ground between resurgent republicanism and bureaucratic totalitarianism. Either we shall revel in unlimited competition and the opportunity to do what we want to do, or we will grovel under bureaucratic slavery.

Socialism-Planning-Communism, as a Way of Life, is seductive indeed to the gripers and the neurotics—who are overly numerous in these times. But . . . this historical law is still true:

All socialist-type governments (which are rampantly supreme bureaucracies) degenerate into police states, eventually.

To enforce their Plans they must "discipline the people" (you and I). They tell us what we *must* do, what we shall eat, and wear, where we shall work, and how we must conduct ourselves. They even regulate our personal compromises with the sex urge in their "planning" of a nation's birth-rate.

The Planners - Socialists - Communists confront us with this selective imperative:

Either we shall enjoy life by "being ourselves" in a capitalist democracy with its individual freedom and mass prosperity—and its allowances for differing tastes and desires—or we will succumb to the degradation of a Communist police state, with its concentration camps, mass murders, and flagrant violations of privacy.

This double-edged imperative is the fundamental issue of our Uneasy Times. The latest scare-headlines atop our daily newspapers dramatize the reason why we must make known our vote on this issue, one way or another. We must stand up and be counted—for or against the deification of bureaucracy.

Our choices as FREE MEN are drawn quite sharply today. They are: Communism vs. Free Enterprise. Russia vs. America. Freedom vs. slavery. Personality survival vs. personal emptiness and frustration. Bureaucracy and intimidation and cowering objectness vs. do-what-you-want - to - do - and - are - fitted - for-best-self-realization.

It's that simple!

Life Without Hope

In Socialist England today there is little incentive to bold undertakings. In England it is safer to be a bureaucrat than a doer, and young men know it. As we can see when we look abroad:

Socialization is competition without prizes, boredom without hope, war without victory, and statistics without end. It takes the heart out of young men, and destroys their youth. Socialism is not only politically false, but morally destructive.

Down through history every attempt to solve human problems through big government had produced the same unfortunate results. This looking to government as a source of all good, all leadership, all inspiration, is the very negation of the democratic principal.

Socialism and communism won't work because *socialists and communists won't work.* In a "planned economy" the incentive *to work* is lacking.

We Americans should heed the warning of Thomas Jefferson when he said:

"If there ever comes a time when we are directed from Washington when to sow and when to reap we will soon want bread."

These Questions Are Urgent

No longer are involved, involuted, dialectical arguments about who should get a bigger slice of pie significant or important. The fundamental issue as far as Americans are concerned has narrowed down to this: sheer patriotism vs. fervent treachery.

No longer can we debate the "injustices" of inequal distribution of the wealth, etc. Piddling, they are, and inconsequential, these arguments, when compared to the imminence of World War III and the menace of Communism.

We now realize that Planners, Socialists, and Communists are *our* enemies. Yours and mine. They're foreign spies, and potential saboteurs. Their loyalty is to Russia, not to us.

Today there's but one primordial question: Are you for Russia or America?

Corollary questions: Are you willing to forfeit your claims to being *human* and *different* from everyone else, or do you want to live like the ants? Are you a *real* Man or Woman, or are you a party or union stereotype? Do you choose to be a rubber-stamp-number on a uniform, or do you hope that the world will recognize your personal worth and applaud you for your talent and ability and hard work?

Your answer—when multiplied by the number of American voters—will determine the trend of civilization for the next 300 years, or maybe the next three million (in case the release of the atomic bomb erases the human race).

The Prime Problem of our Age is this: is dull "security" more worthwhile, in the long run, than stimulating Opportunity?

Communists promise Security which they can't deliver. Freebooting individualists hope for riches—through Opportunity—which they seldom bank.

Capitalists (the conservative equalizers) can and do deliver Security. And, at the same time, they guarantee Opportunity.

Higher living standards, ultra-freedom for personal development, and darned near everything any man could want are possible under capitalistic republicanism.

Capitalism, it would appear to all but the congenitally and belligerently stupid and neurotic, is the economic and political way-of-life which offers most to all.

Some Say

"It's a Great Life"

Will you have One?

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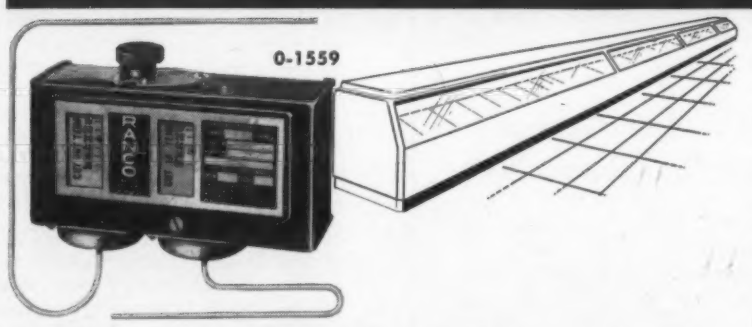
Ranco CONTROLS FOR MEAT CASES



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JANUARY (13 Companies)

	Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1.	Less than 4 cu. ft.....	218	....	....	218
2.	4 cu. ft.	1,548.	....	272	1,820
3.	5 cu. ft.	....	....	....	....
4.	6 cu. ft.	29,547	....	1,771	31,318
5.	7 cu. ft.	72,871	1	2,983	75,855
6.	8 cu. ft.	129,979	....	5,233	135,212
7.	9 and 10 cu. ft.	122,843	....	4,828	127,671
8.	11 and 12 cu. ft.	23,831	....	387	24,218
9.	13 cu. ft. and up	16	....	1	17
10.	**Total**	**380,853**	**1**	**15,475**	**396,329**

Participating companies: Admiral Corp.; Avco Mfg. Corp.; The Coolerator Co.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint, Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; Norge Div., Borg-Warner Corp.; Sanitary Refrigerator Co.; Stoddard Mfg. Co.; Westinghouse Electric Corp.

* * *

Sales Peak In '48 Marks Record Year for Maytag

NEWTON, Iowa — 1948 was the most successful year in the 56-year history of the Maytag Co., Fred Maytag, II, president, reported recently.

Net sales of $68,517,484 and a net income of $8,172,893, or $4.44 per common share after preferred dividend requirements—a record high in both categories—were reported.

They compared to $53,916,620 in net sales and $7,101,579, or $3.78 per share, in net income for 1947.

Maytag expressed the opinion that the home appliance business apparently reached its postwar peak in 1948. He said that "during the year demand and supply progressively moved into balance. First freezers, then ranges, and finally, at the year-end, washers entered the buyers' market.

"The period of readjustment is still in progress and the sustained level of demand for our products which will exist under these conditions has not yet been established."

He added that "although we are currently operating at a volume of business substantially greater than before the war, it seems apparent that we cannot expect 1949 to produce the record sales and profits which we have enjoyed during the past two years."

Admiral Appoints Davis, Freeman to Field Posts

CHICAGO — Two new regional sales managers have been added by Admiral Corp. in an expansion of the sales division, W. C. Johnson, vice president in charge of sales, has announced.

They are J. A. Freeman, who will headquarter in Albany, N. Y., and Walt Davis, who will work out of Detroit.

Freeman, who has been associated for many years with distributors in the western New York area, will service Admiral distributors in Albany, Buffalo, Rochester, Syracuse, Newburgh, and Wilkes-Barre.

For 12 years head of the White Star gas range division of Norge and prior to that time a regional manager for Norge, Davis will serve Admiral distributors in Detroit, Cleveland, Toledo, Grand Rapids, and Saginaw.

New Hotpoint Dealer Is Named

GREENSBORO, N. C. — Strong, Inc., 401 North Elm, has been appointed franchised dealer for Hotpoint appliances. Dennis Strong is president of the firm.

NEMA Household Report--

(Concluded from Page 1, Column 2)

cu. ft. units went up from 99,891 in December to 135,212 in January; those of 9 and 10-cu. ft boxes from 109,103 to 127,671; and those of 11 and 12-cu. ft. refrigerators from 6,323 to 24,218.

January sales of 7-cu. ft. boxes were also up, totaling 75,855 compared to 68,191 for a month earlier. Sales in the less-than-4-cu. ft. classification held firm.

At the same time, volume in three other sizes dropped off. Sales of 4-cu. ft. units slid from 2,076 in December to 1,820 in January; those of 6-cu. ft. units from 58,579 to 31,318; and those of 13-cu. ft. boxes and up from 56 to 17.

Foreign sales during January amounted to 15,476, whereas the figure for December was 13,778. Only one unit went to Canada in January, compared with 24 in December.

Automatic Laundry Patrons Soak Up Culture, Clothes at Same Time

NEW YORK CITY—The first art exhibit ever held in an automatic, self-serve laundry is being staged at The Redmaur Laundromat at 205 Second Ave. here.

Until March 23, patrons can soak up culture while their clothes are soaking up the suds.

More than a dozen oil and water color paintings of landscapes and still life decorate the enamel and tile walls of the laundry. Every one of them was a prize winner in previous competitions in more conventional surroundings.

The paintings are all done by Greenwich Village artists and are for sale at prices ranging from $15 to $150. The exhibit is sponsored by the Village Art Center.

An Art Center official said that the center had to conduct some research first to convince artists that the heated, damp atmosphere would not damage their works.

The manager of the laundry is Izzy Redman.

Date Set for Electrical Living Television Show In Chicago

CHICAGO — The second annual National Television and Electrical Living Show has been set for Sept. 30 through Oct. 9 and will be held at the Chicago Coliseum, announced Axel Kahn, general manager of General Electric Supply Co. and new president of the Electric Association, sponsor of the event.

Personnel from Ebco, Kelvinator Plan Trip To Show Water Cooler

DETROIT—Key members of the sales organizations of Kelvinator Div., Nash-Kelvinator Corp. and The Ebco Mfg. Co. will embark on a 10-day nationwide tour on April 7 to simultaneously introduce to distributor and zone personnel the new line of 1949 Kelvinator electric drinking water coolers, it has been announced.

All phases of a completely new water cooler program will be discussed in the one-day meetings, including the market for the product, national advertising and public relations plans, direct mail promotion, and the new Kelvinator cooperative advertising plan.

Participating in the program are H. C. Patterson, Kelvinator's commercial sales manager; R. G. Alexander, Kelvinator commercial and parts sales representative; and A. R. Benua, president of Ebco. They will jointly present the Kelvinator story in Chicago, Cleveland, and Detroit.

Alexander will also work with S. M. Davison, Ebco's district sales manager, in Minneapolis and Milwaukee.

Lee C. Love, Ebco's general sales manager, and J. E. Oertel, also of Kelvinator's commercial and parts sales department, will appear in Boston, New York City, Philadelphia, Washington, D. C., Pittsburgh, and Buffalo.

T. W. Giller, Ebco's field sales engineer, will give the initial presentation in Greenville, N. C., and Columbia, S. C., on April 5 and 6. He will also cooperate with O. A. Norman of the Detroit Kelvinator commercial and parts sales department in presentations in Cincinnati, Atlanta, Memphis, and Little Rock.

G. T. Etheridge, sales manager of Kelvinator's wholesale commercial and parts division, Detroit, will team up with C. G. Fosnaught, Ebco field sales engineer, to present the program in St. Louis, Kansas City, Dallas, and New Orleans.

C. J. Bachman, Kelvinator's Pacific coast regional manager, and Duane L. Larrabee, Ebco's district sales manager for the west coast states, Hawaii, and Alaska, will contact Los Angeles, San Francisco, and Seattle.

According to H. C. Patterson, presentations in all cities will be patterned along much the same lines.

Utility Releases Data On Reconditioning Cost

GRAND RAPIDS, Mich.—Average sale price, reconditioning cost, and average profit made by Consumers Power Co. on used refrigerators and ranges was reported recently to the Grand Rapids Radio & Appliance Dealers Association by D. Parker McDonald, appliance sales manager for the utility.

These are McDonald's figures:

Refrigerators: Average sales price $105, reconditioning cost $17, and average profit 24.4%.

Ranges: Average sales price $89, reconditioning cost $11, and average profit 20.4%.

He told the association that the utility tries to make a 20% profit on used appliances. He also said that its trade-in allowance on ranges has been reduced recently.

Most Appliance Sales Fall In Nashville Trade Area

NASHVILLE, Tenn.—Local sales of refrigerators, ranges, water heaters, and home freezers in January were all down from December totals, the Nashville Electric Service reported recently.

Water heater sales slipped 3½%, refrigerators 8%, ranges 23%, and home freezers 28%.

As compared with January, 1948, water heater sales were off about 10%, refrigerators about 26%, and ranges 31%. Home freezer sales were up 36%.

Unit sales for these appliances in January, 1949, as reported by 59 dealers plus contractors, housing projects, and plumbers, were as follows: refrigerators 303, ranges 276, water heaters 227, home freezers 15.

Binghamton Furniture Moves

BINGHAMTON, N. Y.—The Binghamton Furniture Co. announced it is moving out of its radio and appliance store at 179 Washington St.

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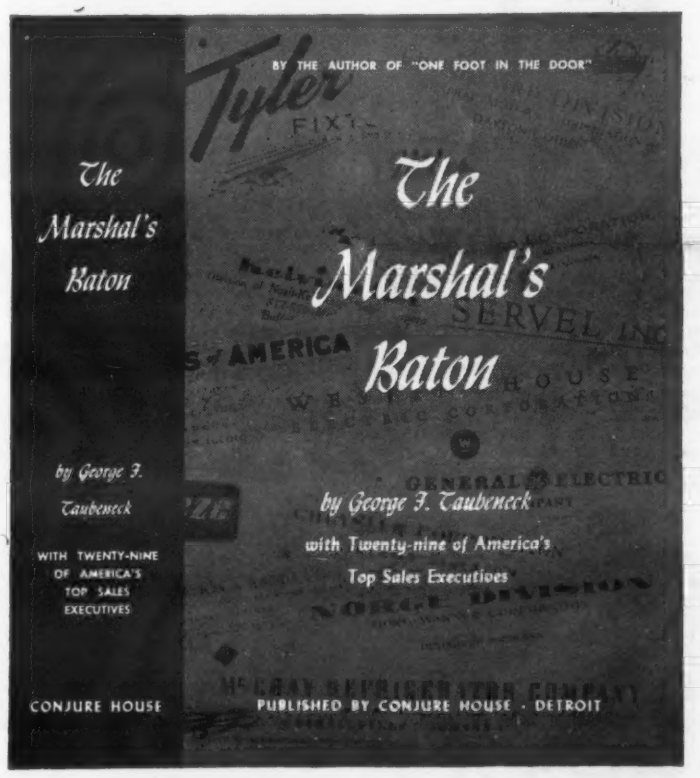
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Howard E. Blood, *President and General Manager, Norge.*
Louis Ruthenburg *President, Servel.*
Frank Pierce, *President, Dearborn Motors; former Vice President, General Motors.*
Jerry Tyler, *late President, Tyler Fixture.*
Henry Burritt, *President, Eureka Williams.*
T. K. Quinn, *President, Monitor.*
C. J. Lawson, *Vice President in Charge of Sales, Kelvinator.*
W. Paul Jones, *Vice President, Philco.*
A. M. "Mike" Sweeney, *Manager of Sales, General Electric.*
George S. Jones, Jr., *Vice President and General Sales Manager, Servel.*
Phil Bratten, *General Sales Manager, Frigidaire.*
Dan A. Packard, *Sales Manager, Kelvinator.*
G. H. "Rock" Smith *Vice President and General Manager, Deepfreeze.*
Lee H. D. Baker, *Sales Manager, Admiral.*
Lee A. Clark, *Assistant General Sales Manager, Frigidaire.*
Ray W. Turnbull, *Vice President, General Electric.*
T. J. Newcomb, *General Manager, Westinghouse Appliance Div.*
John Garceau, *Sales Promotion Manager, Farnsworth.*
E. A. Terhune, *President, General Vending Machine.*
J. Gilbert Baird, *Promotion Manager, Westinghouse.*

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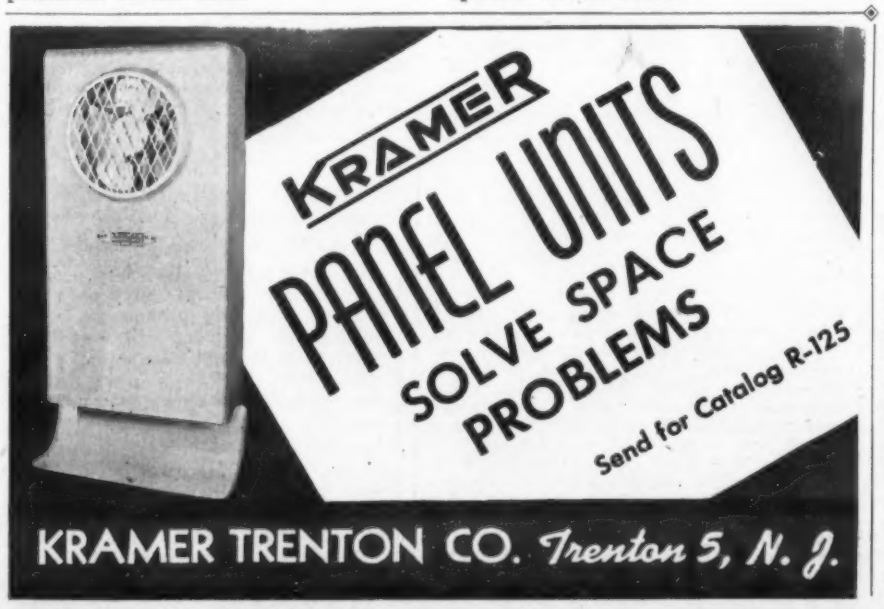
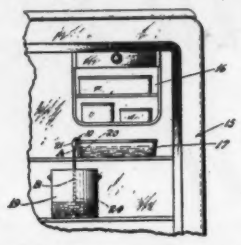


PATENTS

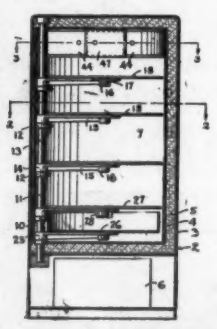
Weeks of Jan. 4 & 11

2,457,851. DEVICE FOR USE IN CONNECTION WITH DEFROSTING REFRIGERATORS. Irving W. Taft, Weehawken Township, Hudson County, N. J., assignor to Kidde Mfg. Co., Inc., a corporation of Delaware. Application Oct. 16, 1944, Serial No. 558,829. 5 Claims. (Cl. 62—1.)



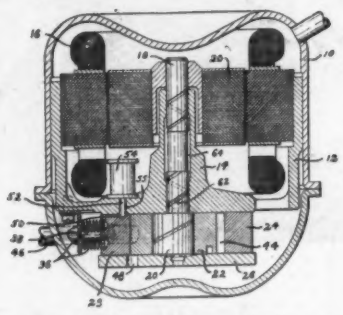
1. An article of manufacture comprising an elongated wick member, and a clip member on said wick member between the ends thereof having a portion extending about said wick member for securing said clip member to said wick member and having a U-shaped portion of greater width than said wick member adapted to be positioned over the side wall of a receptacle and serving as a support for a bent portion of said wick member extending over the same and serving as a shield to prevent liquid dripping from said wick member at the bent portion thereof.

2,457,919. CIRCULAR REFRIGERATOR WITH PIVOTED ROTATABLE SHELVES. James Eaton Ramsey, Houston, Tex. Application Feb. 7, 1944, Serial No. 521,294. 5 Claims. (Cl. 62—89.)



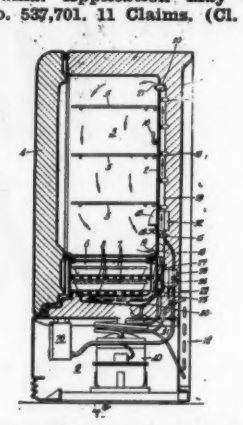
1. A refrigerator including a circular housing having a door portion hinged to swing outwardly and curved to conform to the housing, an upstanding support member disposed substantially upon the circular inside wall of the housing, a plurality of swingable arms vertically adjustable up and down on said support, and rotatable shelves on said arms whereby access may be had to every portion of each shelf.

2,458,018. REFRIGERATION COMPRESSOR STARTING UNLOADER. John M. Murphy, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application July 19, 1944, Serial No. 545,642. 8 Claims. (Cl. 230—138.)



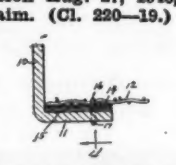
1. A fluid compressor including a stationary member having a compression chamber therein and inlet and outlet ports communicating with said chamber, a rotatable member arranged within said compression chamber, means for driving said rotatable member, means including a blade slidably mounted in one of said members intermediate said inlet and said outlet ports for causing fluid to be compressed between said members during normal running operation of said compressor, means for biasing said blade into sealing engagement with the other of said members, gravity latch means for catching the blade in its retracted position and holding the blade out of sealing engagement with said other member during the starting period of operation of said compressor, and means for releasing said gravity latch means after the compressor has attained its said normal running operation.

2,458,048 HUMIDITY CONTROL SYSTEM. John J. Bauman, Abington, Pa., assignor, by mesne assignments, to Philco Corp., Philadelphia, Pa., a corporation of Pennsylvania. Application May 27, 1944, Serial No. 537,701. 11 Claims. (Cl. 62—6.)



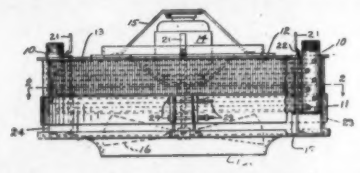
1. In a humidity control apparatus, an enclosure, a refrigerating system for controlling the temperature of said enclosure, means for detecting the moisture content of the air within said enclosure, means controlled by said detecting means for maintaining the moisture content of said air below a predetermined maximum, said last-named means including an electron tube having a heatable cathode, and means responsive to operation of said refrigerating system for rendering said detecting means operable, and for heating said cathode to render said tube operable, only during the cooling cycle.

2,458,113. FREEZING AND DEHYDRATING TRAY. Glenn W. Stevens, Salem, Ore. Application Aug. 27, 1946, Serial No. 693,263. 1 Claim. (Cl. 220—19.)



A tray of the class described, consisting of an angle bar having a layer of plastic disposed upon one leg thereof on the inner side of said bar, in combination with a screen having an inturned edge adapted to rest upon said bar and a binding strip within said inturned edge, together with staples extending through said screen binding strips and angle bar support.

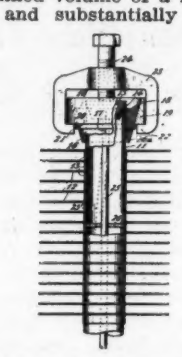
2,458,159. HEAT EXCHANGER. George R. Goldthwaite, North Easton, Mass., assignor, by mesne assignments, to Westinghouse Electric Corp., a corporation of Pennsylvania. Application Nov. 26, 1946, Serial No. 712,355. 5 Claims. (Cl. 257—137.)



1. In a heat exchanger having a propeller fan and heat exchange tubes extending in a circular path centrally around the axis of the fan on the air inlet side thereof, said tubes having radially extending fins thereon the outer ends of which lie on the surface of a cylinder coaxial with said tubes, said exchanger having a wall spaced from said fins and providing a circumferentially extending inlet passage into the inlet of said fan, said fan being arranged to draw air between said fins and through said passage, the combination of a cylindrical damper constricted on said outer ends of said fins and slidable thereon across said passage, and means for varying the diameter of said damper for varying its contact pressure against said outer ends of said fins.

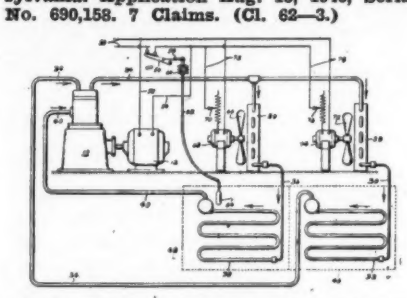
2,458,189. METHOD OF EXPANDING TUBING BY FREEZING LIQUID THEREIN. David E. Morgan, Philadelphia, Pa., assignor to Warren Webster & Co., Camden, N. J., a corporation of New Jersey. Application July 18, 1945, Serial No. 605,698. 4 Claims. (Cl. 113—118.)

1. Method for securing annular fins in positions surrounding a metal tube, which comprises confining within the tube a predetermined volume of a liquid medium partially and substantially to the same



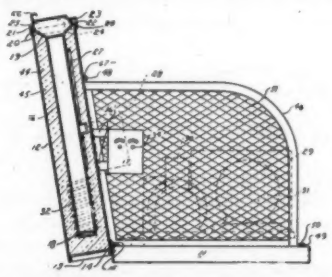
extent filling each cross-sectional portion of the tube, said medium being capable of expanding on solidifying, limiting the amount of said liquid medium by substantially filling the remainder of the space of each said cross-sectional portion within the tube by inserting a substantially non-compressible material which is not subject to a change in state at the temperature of solidification of said liquid medium, then subjecting said liquid medium to a temperature causing such solidification thereof, the volume of said liquid medium being made sufficient to cause upon such solidification permanent expansive deformation of the tube into firm contact with the surrounding fins, and the volume of said material being sufficient to so limit the volume of said medium upon solidifying that no rupture of the tube occurs.

2,458,560. TWO TEMPERATURE REFRIGERATION APPARATUS. Leslie B. M. Buchanan, Springfield, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application Aug. 13, 1946, Serial No. 690,158. 7 Claims. (Cl. 62—3.)



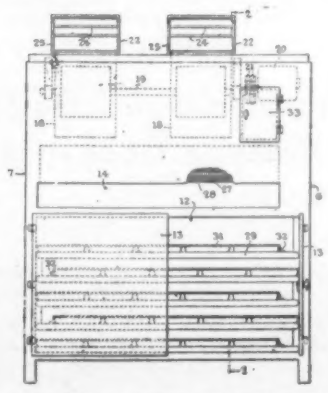
1. In refrigerating apparatus including refrigerant vapor compressing means and two evaporators connected to the inlet means of said compressing means, the combination with said evaporators of two condensers connected in parallel to the outlet means of said compressing means and two capillary flow-impeding tubes, one of said tubes conducting refrigerant from only one of said condensers to only one of said evaporators and the other of said tubes conducting refrigerant from only the other of said condensers to only the other of said evaporators.

2,458,561. PLATE DEVELOPER. James T. Campbell, Detroit, Mich. Application Oct. 31, 1945, Serial No. 625,712. 3 Claims. (Cl. 257—4.)



1. A plate developer comprising a base, a refrigerating mechanism supported thereon, a hollow rectangular angularly arranged frame secured thereto, a hollow developing tank suspended within said frame in insulated and spaced relation thereto, cooling means secured to the wall of said tank and joined to said refrigerating mechanism, and heating means positioned around a portion of said tank.

2,458,589. TWO TEMPERATURE REFRIGERATION UNIT. Keith P. Groat, York, Pa., assignor to York Corp., York, Pa., a corporation of Delaware. Application Feb. 1, 1945, Serial No. 575,652. 9 Claims. (Cl. 62—115.)



1. A combined space cooler and sharp-freezing unit, adapted to be mounted in a space to be cooled, comprisinig in combination, an air-cooling evaporator; a sharp-freezing evaporator; means for supporting material to be frozen in heat exchanging relation with the sharp-freezing evaporator; means for supplying volatile liquid refrigerant to said evaporators in parallel, and for withdrawing refrigerant therefrom; air circulating means; and guiding means for air circulated thereby, arranged to cause the circulating means to withdraw air from the space to be cooled, and after causing it to exchange heat with the air-cooling evaporator return said air to said space at different elevations, said guiding means being arranged to cause one part of the returning air to flow across said material-supporting means.

(To Be Continued)

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OLD ESTABLISHED industrial and commercial refrigeration contracting firm desires capable and experienced man to operate commercial line and service department on a profit-sharing basis. Small investment preferred but not essential. Excellent opportunity for right party. Location: Northern New Jersey. BOX 3128, Air Conditioning & Refrigeration News.

INDEPENDENT SALES representatives for new, nationally advertised, self-contained commercial refrigerator in lucrative, untapped field. Specialty selling experience desirable. Territories will be closed and protected; several still open. Generous straight commissions should reach $10,000 to $15,000 first year. Detail experience, past earnings, age, territory desired. BOX 3129, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

ONE—F24FR FREEZ-E-FEX low temperature unit complete with motor, 220/1/60 and an electrical defrost apparatus, $600.00. One—F12FA Fan-e-Fex heavy duty unit cooler, 110/1/60 motor, $100.00. Two—2 H.P. air cooled York condensing units, 220/1/60, $300.00 each. One—York 3'6" x 6'6" super-freezer overlap door, 6 inch corkboard insulation, left hand hinge, $200.00. One—York 3'6" x 6'6" freezer door, 6 inch corkboard insulation, left hand hinge, $135.00. All of this equipment is brand new, in its original crate. All prices F.O.B. Erie, Pennsylvania. Write APFEL ENGINEERING COMPANY, P. O. Box 1013, Erie, Pennsylvania.

SEALED UNITS rebuilt and exchanged. Prompt service on Coldspot (sealed & semi-sealed). Chieftain, Gale, Tecumseh, Norge and many others. One year guarantee. Write for price list and shipping instructions. BRIGHTON, 3906 Joy Rd., Detroit 6, Michigan.

SPECIAL CLOSE-OUT on brand new freezer plates, coils, and units. Yoder plates—19" x 31" @ $3.75; 21" x 72" @ $7.00. Dole plates—22½" x 33" @ $4.25; 24" x 79" @ $8.00; 22" x 61" @ $6.00; 22" x 72" @ $7.00. (All plates have ½" male or female end connections.) Bush finned coils 76" x 16" x 2¼" 6 tube single row @ $9.00. Chrysler Airtemp air cooled units—¼ H.P. @ $54; ⅓ H.P. @ $60; ¾ H.P. @ $102; 1½ H.P. @ $168. Send deposits to GENERAL REFRIGERATORS CORP., 678 Broadway, New York 12, N. Y.

CLOSING OUT forged brass fittings below cost. ½" IPS x ⅝ flare, # 445 Kerotest angle valves, 95 cents each. ½" IPS x ¾ flare, 90° elbows, 25 cents each, F.O.B. Chicago. C. B. GOODMAN & CO., 6459 S. Morgan St., Chicago 21, Illinois.

MILLS COUNTER freezers: 5 gallon, self contained and 60 gal. hardening cabinets at more than 50% discount due to a favorable buy. New and in original crates. Contact by writing INTERSTATE TRADING CO., Dep't D, 525 Broadway, New York.

CLOSE OUT—below factory cost. Brand new bottle-type electric water coolers in original crates. 115 volts, 60 cycle, A. C., equipped with Universal and Tecumseh hermetically sealed units. Hammer-tone brown with porcelain finish top. Guaranteed perfect; $89.50 each, F.O.B. Chicago. Brand new ⅓ ton window-model air conditioners in original crates—complete with installation kits, walnut finish. 115 volts, 60 cycle, A. C., Universal open-type condensing units; $184.50 each, F.O.B. Chicago. Terms—C.O.D. Quantity limited. LERN SALES CO., 9 S. Francisco, Chicago, Ill.

FOR SALE 3-HP water cooled, "Freon" Copeland machines with 3-HP 3 phase motors $248.00 each. Model 495 5-HP Copeland water cooled "Freon" machines equipped with 26 Copeland compressors and 5-HP 3 phase motors $278.00, all F.O.B. Kansas City, Missouri. These machines are brand new in original Copeland crates and carry the one year factory guarantee. 10% deposit required with all orders, balance C.O.D. THE NAT CORPORATION, 2710 McGee, Kansas City, Missouri.

SUBJECT TO prior sale: Hermetic Chieftain units—⅛ H. P., $44.50; ⅙ H. P., $48.50. Other well known hermetics: ⅛ H. P., fan cooled, $52.50; ¼ H. P., fan cooled, light duty, $57.50; ¼ H. P., fan cooled, heavy duty, $59.50; ⅓ H. P., fan cooled, $69.50. Open units, standard makes: ¼ H. P., $54.50; ⅓ H. P., $64.50; ½ H. P., $84.50. Above prices quoted on lots of six. All open units are 60 cycle, single phase. All above units new, carrying factory warranty. Write for unit list. Penn type 260 Apol low pressure control, $4.25. Penn type 262 Apol high pressure control, $4.25. Minneapolis-Honeywell dual pressure control, $4.50. Detroit Lubricator low pressure control, $4.25. G. E. blower fan motor with 10" fan, $4.50. Superior heat exchanger, 13" over-all, ⅜" x ⅝", $4.25. Mueller heat exchanger, 14½" over-all, ⅜" x ⅝", $5.00. Kramer Trenton panel blower complete, ½ ton, $30.00. Superior master drier ¼" flare x 1¼" x 5½", 75¢. U. S. "Freon" gauge, 4½" face, 30" vac., 150# or 300#, with corresponding temp. scale with red warning hand and mounting holes, $4.50. Scientific Instrument Co. dial thermometer, 4½" face, minus 40 to plus 120, 5 ft. tube, $4.50. 1 set U. S. "Freon" gauge, 2½" face, 100# compound and 300# pressure, temp. scale, recal, and mounting holes, $3.50. Ranco type KW-412 cold control complete, $4.00. American Injector oil separator, ⅛ ton, $3.50. Cold plates 1—30" x 55", 2—30" x 64", 3 to a set, $35.00. 6—5 lb. cans Davison refrigeration silica gel, $6.00. 1—5 lb. can Davison refrigeration silica gel, $1.10. Crouse-Hinds vapor proof refrigerator light, with guard, $2.50. WALTER W. STARR, 1207 George Street, Chicago 13, Illinois.

FRANCHISES WANTED

SALES ENGINEER—Los Angeles—wants one additional outstanding refrigeration or air conditioning accessory line to sell jobbers and manufacturers in California and Arizona. Straight commission. Unexcelled references and outstanding selling record. Warehouse service available. Must be reputable manufacturer and good product. Write: EDITOR, Air Conditioning & Refrigeration News.

FRANCHISES AVAILABLE

PITTSBURGH CHEMICAL Laboratory licensed under Research Corporation patents has pioneered in developing vaporizing units for Triethylene Glycol-Air Purification grade. This field has been given a great deal of publicity in Hygeia, Readers Digest, and Science Illustrated. We have franchises available for an individual or group financially able to handle business of some $300,000 to $500,000 annually for Detroit, New Orleans, Cleveland, Cincinnati, Boston, Denver, San Francisco, Los Angeles, Phoenix, Dallas, Washington, D. C. All other points in America are at present closed. Write, phone, wire PITTSBURGH CHEMICAL LABORATORY, Pittsburgh 22, Pa., for full particulars.

BUSINESS OPPORTUNITIES

WESTERN PENNSYLVANIA: commercial refrigeration and appliance business. Leading franchises. Established 10 years. Sell at inventory, estimated $25,000.00. BOX 3117, Air Conditioning & Refrigeration News.

SALESMANAGERS NOTICE. We are refrigeration contractors and have 45-foot front display floor. We are in a very large and rich retail area. We would like to get a line on some household refrigerator line that is nationally advertised. Our potential is about 150 to 200 boxes per year. If interested write BOX 3121, Air Conditioning & Refrigeration News.

NEW ENGLAND area. Appliance, commercial, sales & service, established fifteen years. Sales, $300,000 1948. Small city. Good profits. Owners would assist purchasers part time first year if desired. To purchase vehicles, inventory, apartment house, store, minimum of $35,000 cash needed; bal. 10 years. BOX 3123, Air Conditioning & Refrigeration News.

MISCELLANEOUS

BACK AND front custom built bars for taverns, restaurants, soda fountains. Unique, clever designs built of mahogany and formica to your specifications in our factory. Instead of selling just the refrigeration, live wire dealers are selling a complete bar job for extra profit. Free photos, layouts, estimates. Write BAKER'S SERVICE, Malone, N. Y.

REFRIGERATION APPLICATION ENGINEER

Fine opportunity for application engineer on industrial refrigeration equipment. Must be thoroughly experienced in estimating and designing low temperature installations for cold storage warehouses, frozen food plants, dairies, etc. Experience with both ammonia and Freon is required.

Location New York City.

Please write stating experience, education, age, and desired salary. Address:

Personnel Division
CARRIER CORPORATION
SYRACUSE 1, NEW YORK

University Circular Recommends 21 Ft. of Wall, Base Cabinets For Convenience In Storing of Food, Kitchen Accessories

URBANA-CHAMPAIGN, Ill.—How much cabinet space is needed for kitchens using factory-made cabinets?

Definite information on this important phase of kitchen planning is now available in an 8-page circular, "Cabinet Space for the Kitchen," by the Small Homes Council of the University of Illinois.

The circular presents results of a research study conducted by the council in cooperation with the Agricultural Experiment Station. The research was done by Miss Helen E. McCullough of the home economics department under a grant given to the university by Hotpoint, Inc.

The research project included studies of both "ample" and "minimum" space. In all cases, items were stored at the point of first use, and in such a way that they could be easily seen and reached in order to save the homemaker steps and time.

Ample space for storage of liberal kitchen supplies, according to the study, can be provided by 7¾ ft. of wall cabinets and 13½ ft. of base cabinets. An additional 2 to 6 ft. of wall cabinets is needed for storage of dinnerware, depending upon whether the family has service for 4, 6, 8, or 12 persons.

If the range center is combined with the serve center, and the sink center with the mix, the wall cabinets can be reduced to a total of 5½ ft. plus the space for storage of dinnerware. The base cabinet requirements remain at 13½ ft., the survey found.

The liberal kitchen supplies, for which these requirements were set up, consist of 156 packaged foods, 8 fresh foods other than those in the refrigerator, 114 utensils, and 12 cleaning supplies.

Recommendations are also made for a limited list of supplies, consisting of 100 packaged and 6 fresh foods, 84 utensils, and 9 cleaning supplies.

Findings are charted and explained in the circular, which also includes some general suggestions for kitchen storage:

"No shelf should be higher than 72 in. from the floor. To make this possible, wall cabinets should be placed not more than 15 in. above the counters of base cabinets. Frequently used items stored on the top shelf of a wall cabinet should be placed only one row deep.

"Use drawers in preference to shelves for most base cabinet storage. Drawers offer more accessible storage. They should be fitted with dividers where needed.

"Avoid using cabinets over the burner section of a range because of inaccessibility, safety reasons, and possible harm to items by heat and moisture.

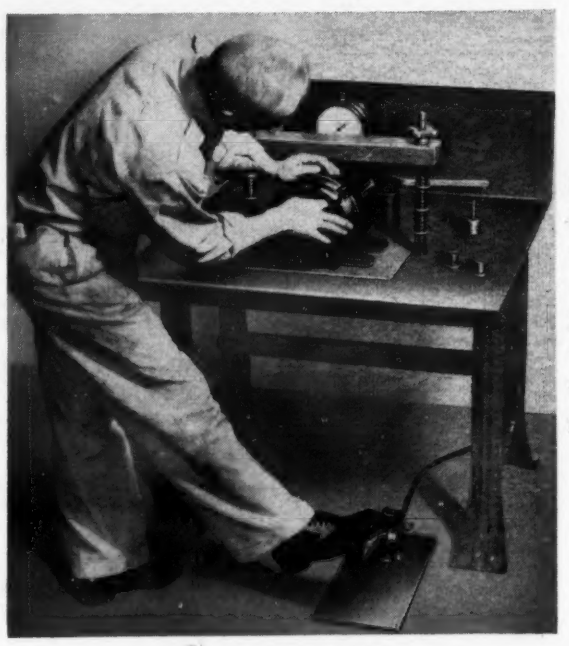
"An over-refrigerator cabinet is beyond the convenient reach of the average-height woman, and is suitable only for the storage of seldom used items."

Until June 1, free single copies of the circular, "Cabinet Space for the Kitchen" can be obtained from the Small Homes Council, University of Illinois, Urbana. After that date the circular will be available at 10 cents a copy.

The circular also constitutes the current "Plan-It" bulletin published by Hotpoint, Inc. and is available from that company.

Hotpoint said that the bulletins are published monthly to supplement its kitchen planning schools for dealers. The bulletins are available to anyone interested on a nominal subscription basis.

Foot-Controlled Motor Tester



This foot-controlled hydraulic dynamometer, designed and built by Wagner Electric Corp., is for load-testing of motors. Tests which can be made with it include: idle, pull-in, pull-up, full-load, and locked.

* * *

Dynamometer Assembly Available to Repair Shops

ST. LOUIS—Hydraulic dynamometers, designed, built, and used by Wagner Electric Corp., have now been made available to electric motor repair shops and other establishments where accurate load-testing of motors is an important operation, the company has announced.

"Tests that can be made with the dynamometer include idle, pull-in, pull-up, full-load, and locked," Wagner explained. "The locked test can be made without having to shut off the motor to insert a locking pin or similar device.

"All tests require very little effort on the part of the operator; the dynamometer is foot controlled, and both the operator's hands are free. Exact foot-pounds of torque can be read directly from the gauge furnished with the dynamometer."

Hydraulic Dynamometer Assembly No. SA-483 is of 30 ft.-lbs. capacity, and has adapters for ½, ⅝, ¾, and 1-in. motor shafts. The dynamometer comes fully assembled on a steel bench top, approximately 36 in. square, which may be mounted on standard steel bench legs or on existing benches in test or assembly lines.

Other dynamometers are available as follows: SA-484, 30 to 300 ft.-lbs. capacity, with adapters for 1⅛, 1¼, 1⅝, 1⅞, 2⅛, 2⅜, 2⅝, and 2⅞-in. motor shafts; and SA-485, which is a combination of the 30 ft.-lb. and the 30 to 300 ft.-lb. machines.

Dynamometers are built "to order" only, and can be delivered approximately 60 days after receipt of order. Further information and prices on these models will be furnished on request to Wagner Electric Corp., 6488 Plymouth Ave., St. Louis 14, Mo.

Wholesaler Opens Branch Opposite Historic Mission

GLENDALE, Calif.—Refrigeration & Industrial Supply Co. here has announced the opening of its first branch store, which is located directly across from the historic San Gabriel Mission in San Gabriel, Calif.

The branch, at 534 W. Mission Dr., is intended to serve dealers in the San Gabriel valley and Pasadena areas, according to the company. "Erv" Melling, who recently moved here from Minneapolis and purchased part ownership in the firm will manage the branch.

Risco's main store was opened at 210 S. Central Ave. here in 1946 by James W. Frantz and Charles Adler. Adler disposed of his interests to Ira A. Hammer last year. Frantz, Hammer, and Melling are the present owners.

Indeeco Issues Catalog On Heater Control Lines

ST. LOUIS—A new catalog covering the company's line of electrical heaters and controls has been issued recently by the Industrial Engineering & Equipment Co. here.

The catalog gives complete data on strip, flat type, cartridge, immersion, and air heaters, hot plates, and thermostat and control equipment. In addition it contains general information on heating liquids and solids, room and space heating, and oven heating. It also has a sheet of data for calculating heat requirements.

The firm is located at 711 S. Theresa Ave. here.

Gibson Forms Sales Div. For Upper N. Y. State

GREENVILLE, Mich.—Formation of a new Gibson sales division in the upper New York state area has been announced by J. L. Johnson, general sales manager for Gibson Refrigerator Co.

The new division includes the following wholesale distributors:

Reines-Freeman Distributors, Albany, N. Y.; Morris Distributing Co., Binghamton, N. Y.; Joseph Strauss & Co., Buffalo, N. Y.; Vermont Hardware Co., Malone, N. Y.; Newburgh Distributing Co., Newburgh, N. Y.; Kemp Equipment Co., Rochester, N. Y.; B. H. Spinney Co., Syracuse, N. Y.; and Vermont Electric Supply Co., Rutland, Vt.

Supervising sales in the division will be Paul Neubert, of Rochester, N. Y., who recently joined Gibson.

His past connections include service as an engineer with the Potomac Electric Power Co., Washington, D. C.; electric range specialist for the Simon Distributing Co., also in Washington; district manager for ranges, refrigerators, and radios, Stewart-Warner Corp.; and as divisional manager for the Poweraire Corp. of Chicago.

Krochmal Joins Anchor Distributing As Advertising, Sales Promotion Mgr.

PITTSBURGH—Aaron Krochmal, former Pittsburgh newspaper reporter and account executive with a local advertising agency, recently joined the Anchor Distributing Co. as advertising and sales promotion manager.

Domestic Engineering Conference Told That Indicating Too Close Shelving Tolerances Needlessly Increases Costs

WASHINGTON, D. C.—"There's a standing joke among refrigerator shelf fabricators that cabinet engineers will complete the design of a refrigerator, open the door of a model, and say, very surprised, 'we forgot to put in the shelves.'

"There should be closer cooperation between the cabinet engineer and the shelf fabricating engineer," urged Don Tichenor of the Tichenor Co. at the Domestic Engineering Conference held here during the annual meeting of the American Society of Refrigerating Engineers.

Several speakers, including Tichenor, participated in the symposium on "Refrigerator Shelf Problems," which was part of the conference.

Outlining the viewpoint of the shelf fabricator, Tichenor went on to say, "Usually the cabinet manufacturer gives the shelf specifications to the fabricator, so that the shelves are usually designed 'for a job' instead of 'to do a job.'

"Should the fabricator suggest changes in design? Shelf fabrication is an art in itself, and much money can be saved in shelf design.

"Too close tolerances are usually indicated for shelves," Tichenor continued. "Generally the shelf drawings are made on the same drawing paper used for compressor parts, which carries close limits of tolerances. An inspector at your factory may turn down a shelf sent in by the fabricator with the comment, 'Don't you read the fine print?'

"Close tolerances increase costs. I'm not suggesting that shelf fabricators should permit sloppy workmanship, but I think," Tichenor concluded, "that the following tolerances may be sufficiently close in most instances: ±1/16 in. for width, ±1/32 in. for stud locations, and ±1/32 in. for crispers."

"I agree pretty much that looser tolerances could be used for shelves in many instances," commented Charles Harris of International Harvester. "Thanks to our industry's pricing setup, the customer today spends $20 for shelving alone in purchasing a refrigerator, so shelving is an important item."

Problems of shelf fabrication and shelf materials, including stainless steel, aluminum, and steel wire, as well as problems of finishing were touched upon by other speakers.

That the year 1948 saw the greatest use of stainless steel shelving since it was introduced was brought out by W. B. Pierce of Allegheny Ludlum, who added that "the long-term trend in stainless steel wire prices is downward. We are trying to accelerate that trend also by extensive expenditures for labor-saving machinery.

"There has also been some concern regarding rusting of the welds in stainless steel shelving, but after tests we have concluded that:

"1. Production shelves didn't show excessive rusting.

"2. This rusting can be eliminated by pre-cleaning.

"3. Rusting is a weld scale that hasn't been removed.

"4. Ordinary refrigeration service won't attack the body of metal itself.

"5. We think the salt-spray tests mask what we try to find out. The salt spray becomes concentrated in the weld crevices."

Developments in aluminum shelving from the early aluminum shelf which "had too much deflection" were outlined briefly by John R. Willard of Aluminum Corp. of America.

"The strength of aluminum was okay, but the deflection required a deeper section. Shelves," he said, "are bought on stiffness rather than strength."

Six major requirements of a refrigerator shelf were then outlined by Willard as follows:

"1. Appearance. With aluminum this is usually an anodic finish which resists corrosion.

"2. Sanitation. Aluminum is nontoxic and odorless.

"3. Ease of cleaning.

"4. Visibility and air circulation.

"5. Weight is of some importance. Aluminum is half the weight of steel.

"6. Cost. Aluminum costs are showing a gradual trend downward. While it is still more expensive than plain steel, aluminum costs less than stainless steel."

As for finishes of shelving, T. G. Coyle of United Chromium asserted that "it is generally conceded that chromium plate is the best looking, but the usual copper-nickel-chromium plating will not overcome rusting at the welds. Zinc or cadmium could perhaps be incorporated to inhibit rust, but this has drawbacks, too."

Widely used today is converted zinc with a clear baked synthetic over it, he said.

TESTED! SURE! PURE!

VIRGINIA REFRIGERANTS

"V-METH-L" Methyl Chloride

"EXTRA-DRY ESOTOO" Liquid Sulfur Dioxide

THERE ARE NONE BETTER

THEY'RE consistently pure consistently sure

50 YEARS OF SERVICE TO INDUSTRY

VIRGINIA Refrigerants

West Norfolk • New York • Boston • Detroit

VIRGINIA SMELTING COMPANY, WEST NORFOLK, VA.

Distributors for Kinetic's "Freon" Refrigerants

AVAILABLE FROM WHOLESALERS COAST TO COAST

Meeting of Appliance Dealers Scheduled For Central Wisconsin

MADISON, Wis.—A meeting of all appliance and radio dealers in the south central section of Wisconsin will be staged in the Loraine hotel here on Tuesday, March 22, Paul Kees, local appliance dealer, has announced.

Kees, who was formerly president of the National Appliance & Radio Dealers Association, will preside at the meeting which will get under way at 10 a.m.

This gathering is part of a statewide program planned in Milwaukee recently by the Wisconsin state committee of NARDA. Sessions patterned after this one are being planned for other sections, it was stated.

Ed Ellman of the Personnel Institute of Chicago will address the morning session on "A Scientific Approach for Selecting Salesmen."

A panel discussion on "Your 1949 Sales Effort" will be led by H. E. Hefty, another local dealer. He will be assisted by George Bracken of La Crosse, Werner Brunner of Jefferson, and Ellman.

Other speakers, who will talk on the advantages of association and mutual cooperation, are Wilmer C. Rehbein, head of NARDA's Wisconsin state committee; C. C. Simpson, NARDA managing director; and George Martiny, past president of the Wisconsin Implement Dealers Association.

The meeting will adjourn in time for a tour through the University of Wisconsin electrified experimental farm.

Landers, Frary & Clark To Ship Refrigerator Models

NEW BRITAIN, Conn.—Shipments of the new Landers, Frary & Clark "Universal" electric refrigerators are scheduled to start the week of March 21, it was announced last week by A. S. Bross, assistant general sales manager.

Landers, Frary & Clark will merchandise two models this year, an 8.5-cu. ft. deluxe refrigerator, and a 9-cu. ft. standard model.

The deluxe model, to be priced at $339.95 including 4-year warranty, will have a horizontal freezer compartment which holds up to 50 lbs. of frozen food, sliding and adjustable shelves, and two vegetable crispers.

The standard model, featuring a "U" type evaporator with two ice cube trays, a dessert tray, and room for frozen food storage, will retail at $259.95.

Dept. Store Sales Drop 9% For Week Ended Mar. 5

WASHINGTON, D. C.—A 9% drop in department store dollar sales for the week ending March 5 as compared with the corresponding week last year was reported recently by the Federal Reserve Board.

The board said that part of the drop at least could be attributed to the fact that Easter comes on April 17 this year whereas it was on March 28 last year.

Only Federal Reserve district to report sales above last year was Kansas City, where the rise was 8%. Declines range from 2% in the Atlanta district to 15% in the Cleveland district.

Sales decreases in other districts were as follows: Boston 9%, New York 11%, Philadelphia 14%, Richmond 13%, Chicago 5%, St. Louis 7%, Dallas 7%, and San Francisco 10%.

For the year to March 5, sales on a national average were 2% below those of last year.

Lynch Reports $966,158 Income From Sales of $7,372,099

TOLEDO, Ohio—Lynch Corp. and subsidiaries have reported a net income after charges and federal taxes of $966,158, or $2.15 per share for the year ended Dec. 31, 1948. Net sales for the year were $7,372,099.

This compared with a net income of $1,185,839, or $2.64 per share, on sales of $8,441,951 for 1947.

NLRB Election--

(Concluded from Page 1, Column 2)

place, under the NLRB order, by March 25. In the case of "Air Conditioning Co. of Southern Calif. et al" (case No. 21-RC-38) elections will be held by employes of 31 firms who are members of the Refrigeration Contractors Association, Inc. and eight non-member employers.

Employes will vote either for Refrigeration Fitters Protective Association, also known as Local 508; or the United Association of Journeymen & Apprentices of the Plumbing & Pipefitting Industry, and its Local 250; or for neither. The board dismissed petitions for election involving 11 other firms, ruling that they were not engaged in interstate commerce.

However, some doubt has arisen that the election will be held by March 25 because there is pending an unfair labor practice charge filed by the Fitters local against the United Association and an employer, and there may be other charges filed.

These charges arise out of trouble on jobs when work was allegedly stopped and men removed and a picket line put around a construction job. The NLRB has generally postponed representation elections when unfair labor practice charges have been filed and have not been disposed of prior to the date set for the election.

With the election set up in the manner that it is, there is a chance that when it is held one union may represent employes of one set of contractors, and a different union may represent another set of employers.

To complicate matters further, a third union element has moved into the picture. Some members of the Fitters Local 508, the independent union, have now joined the Teamster's Union local.

The Teamster's Union, a powerful factor in west coast labor circles and in the A. F. of L. group, is making a pronounced effort to spread its sphere to other fields.

However, the move has met the opposition of the Building & Construction Trades Council of the A.F. of L., and one of the job incidents on which charges have been filed involved a work stoppage sanctioned by the Building Trades Council on a job where men carrying Teamster cards were working.

Appliance Mfrs., Dealers Plan July Mart Session

NEW YORK CITY—A meeting of major appliance manufacturers and retailers to discuss mutual problems has been planned for July 8, during the Summer Homefurnishings Market.

The meeting will be part of a program sponsored by the National Retail Dry Goods Association's Home Furnishings and Appliance Group, chairmanned by Alexander G. Lewi, vice president and home furnishings administrator at L. Bamberger & Co., Newark.

Panel discussions on merchandising problems will feature two dinner meetings at the Palmer House planned by the group. Furniture and bedding will be the subject of the meeting July 7; major appliances and television are on the docket for the July 8 discussions.

Raymond Reed, home furnishings merchandise manager of John Wanamaker, Philadelphia, is planning the program. The major appliances meeting, according to preliminary plans, will take up matters of pricing, servicing, and replacement parts.

The meetings will be open to all interested parties.

Alvey Heads Frigidaire Water Heater Sales

DAYTON, Ohio—B. W. Alvey has been appointed supervisor of water heater sales for Frigidaire Div., General Motors Corp., C. J. Prashaw, manager, range and water heater sales, has announced.

"Alvey has been directly connected with electric water heater selling for 20 years," Prashaw said.

"He first sold electric water heaters at retail with a large utility company. Then he went with a manufacturer, and later a distributor, where he trained dealers, and salesmen all over the country.

"During the recent war, he was with the War Production Board."

U.S. Court Rules That Good Faith Is Not Always Defense In Competitive Price Cut

CHICAGO—Price reductions made in good faith to meet a competitor's price are not always a complete defense against prosecution under provisions of the Robinson-Patman Act, the U. S. Court of Appeals for the Seventh Circuit ruled in a decision made March 12.

The case might have far-reaching significance for businessmen, as lawyers stated that it was the first time the Federal Court had made such a ruling. The decision, a unanimous one, was made in a case brought by the Federal Trade Commission against Standard Oil Co. of Indiana.

The court conceded that price reductions made in good faith to meet competition constituted a defense under the Clayton Anti-Trust Act, but it said this was changed when the Robinson-Patman Act went into effect June 19, 1936.

The Robinson-Patman Act, the court held, "took out of the defense category the provision for making a lower price to meet competition."

Citing other decisions, the court said it agreed with a ruling that "lower price discrimination made in good faith to meet competition, standing alone, may be a defense.

"If there were no further showing that the lower price lessens or tends to prevent competition, the justification in the discrimination would be made out. But in the instant case the commission went further and showed that the petitioner's (Standard Oil Co.) discrimination in price to its wholesale customers did have the effect to substantially lessen competition or to injure, destroy, or prevent competition.

"We agree with the commission that the showing of the petitioner that it made the discriminatory price in good faith to meet competition is not controlling in view of the very substantial evidence that its discrimination was used to affect and lessen competition at the retail level."

Counsel for Standard Oil Co. disagreed with the court's finding on the good faith provision and declared that decision means that a "manufacturer or supplier must sit by and see his dealers taken away from him by competitors who offer to sell like goods for lower prices." The lawyer said no decision had been made on a possible appeal.

The case involved four of Standard Oil's jobber-retailers in Detroit. They were approached by competitors and offered gasoline at several cents less than they were paying. To meet this competition, Standard cut its prices and kept the dealers in the fold.

The FTC ruled against the practice, and issued a complaint and later a cease and desist order.

Randall Bros. Handles Airtemp

ATLANTA — Randall Bros., 665 Marietta St., N.W., has been appointed exclusive distributor for Chrysler Airtemp air conditioning equipment in Atlanta and north Georgia.

REMA Meeting--

(Concluded from Page 1, Column 2)

Weather?" The Friday afternoon session will be concluded with an entertainment feature in the form of pictures of the 1949 Rose Bowl football game between Northwestern university and the University of California.

The Friday morning session will be the annual business meeting of Rema, with an address by retiring President H. F. Hildreth on "Rema Marches On." The past year's activities on public relations will be reported by George E. Mills, head of Rema public relations. Progress reports will be made on such activities as the Sixth All-Industry Show, credit service, ASA-B9 code, and RISAC.

Following is the schedule of events for the period from March 30 through April 2:

March 30—Meeting of Rema board of directors, 10 a.m.

March 31—Combined meeting of Rema-Rewa boards, 10 a.m., concluding with luncheon at 12:30 p.m. Rema export group meeting, 10 a.m. Product section meetings starting at 2 p.m. Rema cocktail party and banquet at 6:30 p.m.

April 1—Annual membership meeting (morning and afternoon). Rema credit manager meeting, 10 a.m.

April 2—Continuation of Rema board meeting and product section meetings if necessary.

Homecraft, Inc., Opens In Elmira

ELMIRA, N. Y.—Homecraft, Inc., featuring a complete line of major appliances, has been opened at 115 Lake St.

YOU ASKED FOR IT...
and now weive
GOT IT!
THE NEW BUSH WJ UNIT
HERE IT IS! The perfect unit for installation at the juncture of wall and ceiling . . . occupying a minimum of valuable storage space . . . supplying maximum circulation with no blast. Easy to install . . . simple to service . . . and a good-will builder for you because its excellent design, quality materials, careful construction, and conservative rating insure lasting customer satisfaction. The New BUSH WJ Unit is AVAILABLE NOW through leading refrigeration and air conditioning wholesalers everywhere in capacities of 800 to 6500 BTU's per hour at 10°TD.
Buy the Best . . . and the Best is BUSH.
Address Dept. C3
for your copy of the
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